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**THE HOSPITAL
IN MODERN SOCIETY**

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THE HOSPITAL IN MODERN SOCIETY

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PREFACE

THIS collection of readings was selected from the literature in the hospital field and in the allied fields of medicine, public health, management and organization, law, sociology, and psychology. It does not pretend to be an exhaustive compilation of all the significant material in these fields. It represents an endeavor to assemble material that is so widely dispersed in the literature as to be unavailable to the average individual who is interested in hospital administration and to arrange that material in an orderly manner.

The book is intended for any of the following individuals: (1) the hospital administrator or administrative assistant who desires to enhance his knowledge through systematic study; (2) the department head who wishes to understand the underlying problems of hospital administration from the administrator's point of view and to broaden his understanding of the principles of hospital management; (3) the student in hospital administration who is about to enter the field professionally and who wishes to correlate his observations with an organized approach to the more important problems in the field.

The material was taken exclusively from the periodical literature and from transactions and committee reports, because it was felt that the few books in the field would be in the libraries of persons professionally interested. Each article was chosen for its judicious analysis of a problem and because it stimulated thought on that problem, regardless of the view of the editors and at times in contradiction with opinions expressed in other articles. Among the authors are men and women who may be numbered among the deans of hospital administration as well as the younger generation of workers in the field. Ninety-eight authors are represented by the 145 articles, some as many as nine times, some only once. Twenty-six of these are hospital administrators, seventy-two represent allied activities.

The search for material covered all the journals in the hospital field since they were first published and the transactions, bulletins, and reports of the American Hospital Association and allied professional organizations since 1930. Material was gathered by Mr. Gerhard Hartman over a period of eight years. Repeated reviews of the articles selected were made by both editors. Because of space limitations, many articles of merit had to be relegated to the *References for Further Reading*. Unavoidable delays in publication account for the absence of articles subsequent to 1940, although bibliographic references have been brought up to July 1943.

In order to achieve a more or less balanced presentation throughout the text as well as to eliminate unnecessary or repetitious material, parts of some articles, especially reports, were omitted. For the most part, editing was confined to making spelling and punctuation consistent. In a few instances, a supplementary note was added to an article whose subject matter is out of date or whose author has modified his views.

The lists of *References for Further Reading* were carefully selected. They are intended as an aid to students of hospital administration in the further exploration of a particular subject, not as a complete bibliography of hospital literature.

The editors wish to acknowledge the generous cooperation of the contributors. Neither they nor the Commonwealth Fund accept responsibility for any of the statements which appear under the names of the original authors, but they are sincerely grateful to the authors and to the original sources of publication for permission to reprint the articles in this form. They wish to make special mention of the gracious attitude met consistently on the part of writers and publishers, for no request to use or adapt material was refused.

A.C.B.

G.H

September 1943

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I. Concerning Hospital Origins, *by S. S. Goldwater, M.D.**

TO make a drama, said the elder Dumas, a writer needs only one passion and four walls. In truth great dramas have been created out of scantier materials. Can one conceive of a greater drama than that which is enacted each time a human being is snatched from the jaws of death, or rescued from the misery of lifelong suffering? For the creation of such a drama a single powerful emotion, pity or love, suffices; the walls of a hospital may be used as a setting, but ages ago the Good Samaritan showed that a dramatic effect, powerful enough to dwell in the memory of mankind forever, may be achieved without them.

Thoughts and emotions lie at the root of all human institutions, hospitals among the rest; and it may be interesting to consider the nature of the ideas from which hospitals have sprung. How easy the task, if every hospital had its historian! Satisfactory hospital histories are rare, but in one that happens to be at hand we may observe how a hospital germinates in the mind of its founder.

In a passage entitled *Johanna Chandler's Resolve*, B. Burford Rawlings, historian of the National Hospital for the Paralyzed and Epileptic, of London, tells us that a journeyman carpenter, who lived near Miss Chandler, "was struck down at his work and was carried home to be nursed by his wife, a wreck of a woman in the last stages of consumption, with no knowledge of nursing and already encumbered by the care of four small children. Miss Chandler tells us that she never forgot the scene of that desolate home, and we can well understand how the impression deepened when she found that among all the hospitals of London not one would open its doors to a case of that sort, that the splendid efforts of philanthropy, so potent and far-reaching in most directions, stopped short here, and that for the medical treatment of the victims of paralysis and the many kindred affections of the nervous system, neither the metropolis nor any of the provincial cities made one iota of provision. 'God helping, I made the resolve,' said Johanna Chandler, 'that I would devote my life to an endeavor to supply this want.'" Within the four walls of the Hospital for the Paralyzed and Epileptic, thus begun, countless acts of devotion have since been performed, and the machinery which the generous impulse of Johanna Chandler set in motion is still working wonders.

Although to most of us the hospital is a fairly definite object, its origins are various. At one end of the fertile field in which hospitals have taken root we encounter resolves like that of Johanna Chandler—thoughts illumined with gentle feminine sympathy. At the other extremity we encounter motives of a totally different quality. Shall we pay homage to the tyrannical millionaire who, brushing aside impartial and sensible advice, insists upon the erection of a monumental hospital which the community does not need and

* Adapted from *Mod. Hosp.* 23:395-398, Nov. 1924.

which it is unable to maintain? Shall a place be reserved in Valhalla for the covetous real-estate shark who, concealed in the folds of a pseudo-philanthropic hospital organization, foists upon a city a site which he knows to be ill-adapted for hospital use? Shall we tamely and tacitly consent when physicians, with no better motive than personal aggrandizement, form a society to assist them in needlessly duplicating existing hospital facilities? Such perversity of motive in hospital founders is, unfortunately, not rare. A more curious example of distorted vision is that of the well-to-do citizen who, according to his neighbors, sought to outrage the feelings of his widow, a woman known for her strait-laced views, by bequeathing his fortune for a hospital for the care of unmarried mothers. Little did he realize that hospitals, like individuals, have the power of adapting themselves to their environment, and that in less than a dozen years the hospital that he endowed would find a way to satisfy more urgent local needs.

Fear, which has played countless scurvy tricks upon mankind, often paralyzing the hands of would-be saints and sinners, is, oddly enough, one of the most common causes for the creation of hospitals. When a modern health department seeks to obtain an appropriation for a hospital for contagious diseases, it employs all the tricks of the propagandist to stampede an alarmed populace into an act of self-preservation. This motive for the creation of a hospital is not a new one. In his delightful history of the Pennsylvania Hospital, Dr. Thomas G. Morton tells us that in the year 1743, fully eight years before sundry inhabitants of Pennsylvania petitioned the provincial Assembly for permission to establish the Pennsylvania Hospital, the pesthouse on Fishers Island was purchased by the authorities for a quarantine station for the shelter and isolation of persons arriving from sea with epidemic diseases. This public provision for the "sick and distempered immigrants," says Dr. Morton, "had in all probability been inspired, not so much by a tender concern for their welfare, as by the desire to keep such persons out of the city, and thus isolating them, to prevent the introduction of contagious diseases."

Need one dwell upon the religious motives in hospital service? If a hospital is avowedly established in honor of the living God can it falter in its work of human salvage while faith lasts? On a far lower plane of devotion, and yet not without a faint tinge of glory, are hospitals established in honor of mere earthly sovereigns. And in our own country, where religious zeal sometimes flags and where kings are unknown, hospitals are worthily inspired by a sentimental regard for the memory of parents, husbands, wives, children, and friends.

Sympathy for the sick is quick and contagious. In a certain city in Pennsylvania, many charitable enterprises resort to the city streets for the solicitation of funds. The fair solicitors swarm over the sidewalks, exchanging beautiful flowers, colored ribbons, and embossed buttons for money and in this pleasant pastime, I am told, the hospitals fare better than any of their competitors—the children's hospitals best of all.

Where sympathy for a particular sufferer or group of sufferers results in an effort to organize a hospital, the effort is frequently directed into a special channel. We are all familiar with hospitals established for the exclusive benefit of mothers or infants; of cripples, in-

curables, the tuberculous, or lepers; or Italians, Negroes, industrial workers, or soldiers. Frequently the special group whom the founders seek to benefit consists of their co-religionists. Indeed, sectarian hospitals are now all about us, a striking feature of American life; and so potent is the influence of environment that even the germ-proof Christian Scientists, strangers to all infirmity, may soon decide to establish hospitals of their own. At present Christian Scientists who resort to hospitals for the correction of the purely mental error of a broken bone seem adrift in what Myers called the "interspace between faith decayed and faith re-risen."

For hundreds of years the greatest strength of an appeal for funds for hospital support lay in the poverty of the hospital's beneficiaries. Until recently the hospitals of England refused to accept any payment from a patient, lest the perfect purity of their charity be marred. In our country, today, a voice is heard throughout the land crying out for hospital accommodations, not for the pauper, but for the middle class whose need is paradoxically asserted to be even greater than that of the poor.

How pitiable is the plight of the diseased in mind! I believe that genuine sympathy for these unfortunates, quite as much as personal dread of the consequences of their neglect, has rallied the American nation to the liberal support of hospitals for the insane. No longer is it necessary to present to legislatures, as did in 1751 certain petitioners in Pennsylvania, the pitiful picture of persons of unsound mind, "some of them going at large, a terror to their neighbors, who are daily apprehensive of the violences they may commit. And others are continually wasting their substance, to the great injury of themselves and families, ill-disposed persons wickedly taking advantage of their unhappy condition, and drawing them into unreasonable bargains."

Financial and pseudo-financial calculations play a considerable part in the launching of hospital projects. Health officers appealing for departmental appropriations have long been accustomed to make use of equations in which human life is set off against an assumed equivalent in dollars. In slave-owning days the comparison might have been allowed, but is it not high time for the economist, with his cold-blooded calculations, to withdraw from a sphere in which the body is regarded as something more than a cog in the mechanism of industry, devoid of spiritual meaning? The support of a hospital may indeed be good business, viewed merely from the standpoint of industrial efficiency, but the hospital whose thoughts are merely venal, whose activities are not suffused with uplifting emotion, does not merit a place in the company of the blessed. But to judge a hospital without full knowledge of the character of its work would be unfair—the quality of wine depends on its taste, not its label. Hospitals whose primary motive is financial profit have done and are doing excellent clinical work, are alleviating misery, and in some instances are contributing notably to scientific research.

The pessimism of a recent essayist who speaks of the "illusion of advance" finds no echo in the alert and forward-looking hospitals which aim to make their contribution to human welfare by means of the intensive study of medical problems, and which believe in the reality of progress.

While scientific discovery is a familiar by-product of the progressive and well-ordered hospital which aims to save the life or lessen the sufferings of its patients day by day, these latter results, oddly enough, are often most effectively achieved incidentally to the work of the research hospital, whose scientific objective is quite remote from the well-being of its immediate guests.

The motives of the far-flung army of medical missionaries seem to be mixed in varying proportions. The primary object of the medical missionary is, presumably, to save souls, but I have visited missionary hospitals in which the medical ardor of the staff seemed to be greater than its religious zeal. In many parts of the world missionary hospitals, through the singular devotion of their staffs, are accomplishing marvelous results in circumstances and with equipment that would be scornfully rejected by our hospitals at home. In the presence of a woman doctor who, in a distant country and among an alien people, conducts single-handed a hospital of a hundred beds, one is struck dumb with admiration. The Far East has many such glorious women.

There is a sense in which missionary hospitals and military hospitals resemble each other, each being primarily concerned with something beyond and different from the cure of the individual patient. While one for purely military ends seeks to conserve the manpower of an earthly state, the other strives with all its might to recruit souls for heaven.

Alice Meynell speaks of a friend who always "prayed temperate prayers and harbored probable wishes." The hospital founder is not always such a sweetly reasonable person. Fundamentally the goal of the hospital is unattainable, for if death be the enemy whom the hospital seeks to overcome, the aim of the hospital is no less than to confer immortality; it may force the enemy back, but crush him it never can. And yet the hospital struggles bravely on, showing how "the squalid story of human life upon this earth" may be "lit by amazing flashes of intelligence, of valor, of pity, of sacrifice, of love." Let us bow our heads in reverence to the memory of Father Damien, who succored the outcast leper; let us praise the gallant figure of Florence Nightingale, who made hospitals safe for the sick; let us be grateful for the presence among us today of a multitude of men and women who, without thought of self, dedicate their lives and their fortunes to the service of the sick, the halt, and the blind.

2. A History of Hospitals, by *Nathaniel W. Faxon, M.D.**

HISTORICAL reference must always presuppose the existence of an institution for a varying period of time preceding the date of reference. Therefore much medical history antedates the first actual mention of hospitals. References to the practice and customs of medicine and descriptions of hospitals are found in the books of the Old Testament, the early Indian writings of the Susrata and Charaka, and the early Greek historians Herodotus, Thucydides, and Xenophon. Additional information has also been gleaned from papyri and temple sculpture in Egypt.

* Adapted from *Bull. Am. Hosp. A.* 3:20-36, Jan. 1929.

Burdett believes:

The art of healing first took its rise in or near Mesopotamia, for there were the birth and first seat of mankind. Thence physic passed with astronomy and language into Phoenicia and from Phoenicia it might have spread into Egypt, but that Egypt did not produce the cultivation of arts may be inferred from the nature of the country which was not habitable until it had been made so by the construction of artificial moats and banks.¹

This can hardly be accepted as more than an opinion for as far as we can rely upon historical records, which are notoriously incomplete, it would appear that more or less settled communities, which might be dignified as civilizations, existed in both Egypt and Mesopotamia between 5000 and 6000 B.C. The first Sumerian writings are 4500 B.C. and the First Dynasty of Egypt is of about the same date. Even if it be true that medicine began in Mesopotamia we are equally indebted to Egypt for the earliest progress in the art.

Herodotus says of the Babylonians:

They bring their sick to the market place for they have no physicians; there those that pass by the sick person, confer with him about his disease, to discover whether they have themselves been afflicted with the same disease as the sick person or have seen others so afflicted; thus the passers-by confer with him and advise him to have recourse to the same treatment as that by which they escaped a similar disease, or as they have known to cure others. And they are not allowed to pass by a sick person in silence, without inquiring into the nature of his distemper.

This was the first method of practicing physic and may justly be assumed to have been a very ancient custom extending back probably for thousands of years.

Early medical history in Egypt is drawn largely from three papyri, the Papyrus Ebers (1550 B.C.), the Papyrus Harris, and the Berlin Papyrus. Burdett says:

The Egyptians made great advances in medicine. Their priests who acted as interpreters between the gods and men, approved of the opening of dead bodies to ascertain the cause of death and this also had the sanction of their kings. The germ of a hospital system may be found here also as there were in the eleventh century B.C. official houses to which the poor went at certain times, apparently corresponding to our Out-Patient Departments. There was also a college of surgeons, supported by the state which regulated the nature and extent of the practice of medicine. This college belonged to the sacerdotal cast. Women were allowed to practice medicine. According to Pliny, as these physicians were paid by the state they were required to treat the poor gratuitously. This they did in the official houses "or hospitals" rather than in the homes of the poor or in the physicians consulting rooms.

¹ Henry C. Burdett, Surgeon and General Superintendent of the Queen's Hospital, Birmingham, *Hospitals and Asylums of the World* (1893).

There were specialists in those days as well as today for Herodotus says:

The art of medicine is thus divided amongst them; each physician applies himself to one disease only; some physicians are for the eye, others for the head, others for the teeth, others for the parts of the stomach and others for internal disorders.²

Their dentists were skillful enough to fill teeth with gold as shown by mummies found at Thebes. Medicine was directly encouraged by their kings and one of them, Athethus, son and successor to Menes, the first king of Egypt, wrote a thesis on anatomy in 4800 B.C. But medicine was much older than that, for the Berlin Papyrus, which dates from the fourteenth century B.C., contains a *copy* of a treatise on inflammation, which the papyrus states was found in an ancient writing rolled up in a coffin. We can be very sure then that the practice of medicine began much earlier than the fourteenth century B.C. and that some sort of hospitals existed earlier than the eleventh century B.C.

Burdett relates that in India King Asoka, who reigned in the third century B.C., published an edict commanding the establishment of hospitals throughout his dominions. He was a great king but monarchs of his type seldom invent; they systematize, and it is more probable that King Asoka's edict was meant to improve rather than to initiate a hospital system. His works endured in working order for over six hundred years, for a Chinese traveler, Fu-Hiam, was sufficiently impressed to describe this hospital system in detail.

The Temple of Aesculapius at Epidaurus (in Argolis, Greece, opposite Athens), mentioned by Pausanias, was apparently a medical establishment to which the sick resorted in the hope of being healed by divine aid, in much the same spirit in which they now go to Christian shrines such as St. Anne de Beaupré near Quebec. Women were not allowed to lie in there, and the dying had to be removed from the temple grounds. These restrictions were later removed, and in 170 A.D. Antonius, a senator, erected buildings there, one for the dying and one for women, which may be regarded as probably the first regular hospital erected in Europe.

Adopting the Egyptian custom of state medicine, Athens in the fifth century B.C. had physicians elected and paid by the citizens and there were (according to Pindarus) dispensaries in which these physicians received their patients, and there was some kind of a hospital attached to the Temple of Aesculapius there. It was the custom to write on tablets or engrave upon the pillars of the temple those remedies which experience had shown to be effective, which, together with the narration of the diseases of devotees, became a sort of clinical record to which teachers and students referred and which were studied by the professional visitors who even those days "walked the wards." In addition to the priestly doctors there were lay doctors or Aesculapiads. There were also gymnasts who, although they were supposed to possess some medical knowledge, do not appear to have been connected with medical establishments of any kind.

The next advance in the care of the sick came through the doctrines of Jesus and the

² Herodotus 480-428 B.C. From text of Baehr. Henry Cary.

spread of Christianity which produced a new spirit of compassion toward the sick. For, as Garrison says, "while the germ of the hospital idea may have existed in the ancient Babylonian custom of bringing the sick into the market place for consultation and while the aesculapiae and latreia of the Greeks and Romans may have served this purpose to some extent, the spirit of antiquity toward sickness and misfortune was not one of compassion and the credit for ministering to human suffering on an extended scale belongs to Christianity."³ The real accomplishment of later Roman and medieval medicine was the building and organizing of hospitals on an extended scale animated by a new spirit and the development of the nursing of the sick.

The aesculapiae were closed by edict of Constantine in 335 A.D., to be rapidly replaced by Christian hospitals. One of the most celebrated of these hospitals, which served as a model for other hospitals throughout the Empire, was founded by St. Basil in 369 A.D. in Caesaria in Cappadocia, about 500 miles east of Antioch, Asia Minor. It consisted of a large number of buildings, including houses for the physicians and nurses, workshops, and industrial schools. "It rose to view like a second city, the abode of charity, the treasury into which the rich poured of their wealth and the poor of their poverty. Here disease was investigated and sympathy proved."⁴ St. Basil infused his own noble spirit into this institution and taught that real Christianity means thoughtfulness and kindness to others, especially the sick and helpless; to pity, not to hate.

The pilgrimages which Christians, from very early times, made to the Holy Land helped the spread of the hospital system that gradually extended over the Empire. The Emperor Constantine built a "hospitium" at Byzantium for strangers and pilgrims. In 550 A.D. Justinian built at Jerusalem the Hospital of St. John, where were founded the orders of the Knights of St. John and later of Rhodes and Malta, whose duty was to tend sick pilgrims and nurse wounded Crusaders. This gentle duty they promptly forsook for more warlike occupations.

The first hospital in western Europe was founded in 380 A.D. by Fabiola, a Roman matron of distinguished piety. The exact site of this rather famous hospital is uncertain but St. Jerome describes it as "a house in the country, for the reception of the unhappily sick and infirm persons who were before scattered among the places of public resort; where they would be furnished in a regular way nourishment and those medicines of which they might stand in need." To conform with the growing Christian idea of charity, hospitals began to be founded for special purposes; there were hospitals for the sick alone, for foundlings, for orphans, for the helpless poor, for the aged, and for poor and infirm pilgrims.

Naturally enough, hospitals during the Middle Ages grew up attached to cloisters and monasteries; in fact monasteries served as the first hospitals or hospices, in that they provided resting places for pilgrims and sick. Thus the task of nursing the sick became specially the province of members of religious bodies, in whose hands it still remains in nearly all Catholic countries. Thus the title of "sister" given to members of nursing orders carries

³ Fielding H. Garrison, M.D., *History of Medicine* (1917).

⁴ A. Tollener, *Des Origines de la Charité Catholique*.

on the original union of hospitals and religious organizations. The gentle St. Francis of Assisi taught his followers by example and precept to nurse the leprous and sick.

Undoubtedly the hospital movement of medieval times was immensely influenced by the incidence of leprosy throughout Europe during the Middle Ages. The first leper hospital mentioned was in connection with St. Basil's hospital at Caesarea, to which was attached a house of separation for lepers, who previously had received a certain amount of care, more for the protection of others than out of charitable care for those afflicted, but who now here received care for their own sake. It is probable that isolated abodes were to be found outside all cities for the segregation of lepers. The number of these lazar houses was extraordinary; there were 220 in England and Scotland and over 2000 in France. It has been estimated there were 19,000 hospitals in Europe. "While the hospital care in lazar-houses comprised only nursing and seclusion with absolute omission of treatment, it is clear that the building of these leprosaria represented a great social and hygienic movement; a wave of genuine prophylaxis as well as human charity."⁵

In the thirteenth century hospitals had a right to one quarter of all the revenues of the clergy. During the fourteenth and fifteenth centuries the religious fervor of the period of the Crusades had cooled and the two epidemic diseases, leprosy and St. Anthony's fire or erysipelas, which had devastated Europe, having nearly disappeared, many hospitals fell into decay. By this time many splendid city hospitals had grown up, such as the Hôtel Dieu founded in 600 A.D. in Paris, the famous hospital of Lyons founded by Childebert in 542 A.D., one in Milan in 777, St. Bartholomew's in London in 1123, and many others. In many cases this change from the ecclesiastical management to lay municipal control was by mutual consent.

Garrison tersely presents the situation that followed:

The seventeenth century was preeminently a period of intense individualism. With the decline of collectivism, there necessarily went a corresponding decline in things that had thrived under its régime, in particular organized nursing, charitable care of the sick and well managed hospitals for this purpose.

Because of their intimate association with hospitals, a short description of the most famous nursing orders would seem desirable. The first of the great nursing orders was the Parabolani, organized in Alexandria during an epidemic of plague in 253 A.D. This order became very powerful and prosperous but, exceeding the authority allotted to it by the Church, was suppressed. The Hospitallers or Knights of St. John of Jerusalem, 1098, and the Knights of the Teutonic Order, 1191, were originally founded as nursing fraternities for the care of sick and wounded Crusaders, but soon became purely military orders. The nursing order of Our Lady of Mount Carmel originated at the famous hospital of St. Basil in Caesarea. In the tenth century Beuezach instituted in France the order of St. Jacques du Haut Pas devoted to the care of the sick and pilgrims.

In 1217 the Order of Soeurs Augustines was founded for the nursing of the sick in the

⁵ Garrison, *op. cit.*

Hôtel Dieu of Paris, which with various ups and downs of good and bad nursing continued until 1888. During the seventeenth century St. Vincent de Paul founded a nursing order and gave to it such wise regulations and such high ideals that it has maintained a high standard of nursing and a singleness of purpose to this day. This order has proved its worth among the clerical nursing orders and is still carrying on.

In 1836 Theodore Fliedner and his wife Fredericke opened a small hospital in Kaiserworth, Germany, for the care of the sick poor. Here began, with this revival of the system of deaconess nursing, the modern period of nursing. From this humble beginning the movement and improvement of nursing have spread throughout the world.

This was the foundation; the great driving force was to come from another. Just as St. John the Baptist prepared the way for Jesus, so it would seem that the Fliedners prepared the way for Florence Nightingale. Emerson once said, "One single idea may have greater weight than all the labor of all men, animals and engines for a century." Florence Nightingale had such an idea about nursing and hospitals, one that has influenced the entire world ever since. Nursing as we know it and speak of it dates from that idea.

To understand the tremendous improvement that has taken place in hospitals during the last 150 years it is necessary to describe some of the hospitals of the latter part of the eighteenth century. Few people of this day have any conception of what hospitals of that period were like or realize what terrible places they were.

In 1788 M. Tenon, a professor of the Royal Academy, was commissioned by Louis XVI to make a study of the hospitals of Paris. Tenon's *Memoirs of the Paris Hospitals*⁶ shows what horrible places hospitals were in those days. The mortality among all patients in the Hôtel Dieu was 1 out of 4 or 25 per cent; even in the best hospitals, as that at Edinburgh, it was 1 out of 25 or 4 per cent. (This must have been an exceptional year as the average now is about 7 per cent.) Among obstetrical patients the mortality was 1 out of 15, and there was 1 stillbirth for every 13 children and epidemics of puerperal fever sometimes necessitated the closing of the wards for long periods. The high mortality included surgeons and attendants, ranging from 6 to 12 per cent, "whereas," Tenon remarks, "it should not ordinarily exceed 3 per cent." What would a modern hospital staff think of looking forward to an annual mortality among their numbers of 3 per cent as the natural course of events?

The Hôtel Dieu was a huge place accommodating between 2,500 and 3,000 sick (of course there are hospitals today that have this number of beds); it admitted contagious patients, smallpox, measles, dysenteries, and itch; accident cases and surgical patients; fevers of all sorts; insane and hydrophobias (i.e., rabies, which shows, when special mention is thus made of it, how prevalent was this disease which now is so rare), and obstetrical patients. The segregation of patients was limited to placing obstetrical patients in one ward, accident and surgical cases in two others, while insane, fevers, and contagious, excepting

⁶ *Mémoires sur Les Hôpitaux de Paris*, par M. Tenon, Professeur Royal de Pathologie au Collège de Chirurgie, des Académies Royales des Sciences, de Chirurgie et de la Société Royale d'Agriculture de Paris etc. Imprimés par ordre du Roi. Avec figures entaille douce. A Paris. De l'Imprimerie de Ph.-D. Pierres. Premier Imprimeur Ordinaire du Roi etc et se trouvent chez Royez, Libraire quai & près des Augustins (1788).

smallpox for which there was a small separate ward, were grouped together in the remaining buildings and wards. Tenon devotes six pages of his study to prove the desirability of single beds for patients, deploring the use of "grand lists" holding 4 to 6 patients. He naïvely argues that when a bed that is fifty-two inches wide has six patients, then "each will have only eight and one-half inches at his disposal, while it is necessary that a man have at least eighteen inches for comfort in lying. Such is necessary to recover strength, sleep and rest and to escape too great squeezing and to prevent pain." To avoid the temptation to thus overcrowd the beds he recommends the use of a single bed for each patient.

He recommends that the insane and hydrophobias should be separated from other patients and the incurably insane removed to other hospitals. The surgical wards must have been chambers of horrors, for recently injured patients, convalescents, and dying were grouped together indiscriminately; the preparations for operations and the operations themselves, without anesthetics, were carried on in a small room adjoining the ward so that the cries of those suffering operations were distinctly audible to those awaiting and those that had experienced similar trials.

In the obstetrical wards patients were placed 4 to 6 in a bed—"those about to be confined, those recently delivered, those in the second week, those who are sick and those who are not, communicating their ills to each other; greatly crowded and their situation such that if one opens their beds such a stinking hot vapor arises that one recoils and tries to protect oneself."

Attendants were divided into those who resided outside the hospital and who, as Tenon notes, were usually much stronger and healthier, and those who lived in. Those who lived in did so literally for they lived in the wards with the patients, "occupying the small beds and thus forcing the sick into the grand beds."

He complains that everyone has the itch (scabies) and does not see how it can be otherwise with such crowding. "Such a condition is deplorable for when these patients leave the hospital they must needs spread this disease into whatever homes they go."

Evidently no means was provided to heat the wards, as he speaks of the fire hazard caused by the practice of carrying pails of live coals into certain wards. He also recommends the proper size of wards to be ninety feet long by twenty-five feet wide and the height to be from twelve to sixteen feet according to the use to which it is put. Less height than this "makes the wards smell bad and greater height makes them too cold."

Sanitary accommodations were almost nil. For the accommodation of 583 sick and attendants there were five seats over a sewer; not flushed water closets. Here were emptied basins from commode chairs in the wards, for the use of patients too sick to go to the seats, basins from the operating rooms, pus basins, sputum basins, wash water, etc. The "odor is awful, permeating the entire place, which is separated from the surgical ward by a single door." Such was the most famous hospital of Paris.

John Howard was an Englishman who determined to investigate and improve the conditions of jails, hospitals, and lazarets of England and Europe. He made a tour in 1784

and later a more extended one and in 1789 published his famous book, *An account of the Principal Lazarettoes in Europe . . . with further observations on some Foreign Prisons and Hospitals and additional remarks on the present state of these in Great Britain and Ireland*.⁷

A situation existed then that is scarcely comprehended now, in that in the common mind there existed but little difference between the jail and the hospital. The accommodations and care afforded the patient then were just a little better than those provided for the criminal. The jail conditions of those days were horrible beyond conception today.

In Howard's discouraging account of these evil conditions there stands forth one shining treatise. The board of trustees of the Lock Hospital for Venereal Patients wrote into their articles of incorporation the following wise and charitable article: "A prejudice prevails in the minds of many people against such hospitals. (Therefore) their (patients) having brought on themselves the disease by their own sin and folly, is no reason why they should be left to perish. A life lost to the public from whatever cause is still a life lost. How dare any make this an objection. Suppose the Redeemer had urged such a plea against becoming poor for our sakes; suppose he had said of us 'Leave those sinners to the consequences of their sin and folly.' " It took 140 years and a World War to make us as a people accept this sensible doctrine.

These two publications of Tenon and Howard disclosed to thinking people the deplorable state of hospitals and formed the starting point of a reformation of hospitals. This reformation was carried forward as best it could be according to the limited medical and social knowledge of those days. Considerable advance was made through the social revolution in England marked by the passage of the Factory Laws and Reform Bills, and similar democratic advances in France and Germany: the French Revolution and the Revolution of 1848.

But progress was painfully slow. The next fifty years, however, were to contribute greater progress than had been made before in three thousand. The first advance came from America, the land of youth and promise. Surgery had always been limited because of the pain and suffering which even the simplest operative procedures caused. Amputations, incisions for abscesses, lithotomy, the operation for cataract and trephining comprised almost the entire list of operations that could be carried out on patients drugged into partial insensibility by opium and whiskey and bound down by ropes and straps and further restrained by strong attendants. Suddenly there came an announcement that seemed to a suffering world as though God had heard and answered their prayers. In the Ether Dome of the Massachusetts General Hospital appears this inscription:

On October 16, 1846, in this room, then the operating theatre of the hospital; was given the first public demonstration of anesthesia to the extent of producing

⁷ John Howard, F.R.S., *An Account of the Principal Lazarettoes in Europe with Various Papers Relative to the Plague, together with Further Observations on some Foreign Prisons and Hospitals and Additional Remarks on the Present State of These in Great Britain and Ireland* (1789).

insensibility to pain during a serious surgical operation. Sulphuric ether was administered by William Thomas Green Morton, a Boston dentist. The patient was Gilbert Abbott. The operation was the removal of a tumor under the jaw. The surgeon was John Collins Warren. The patient declared that he had felt no pain during the operation and was discharged well December 7. Knowledge of this discovery spread from this room throughout the civilized world and a new era for surgery began.

Then came the Crimean War, 1854-56, and the clear-sighted criticism by Florence Nightingale of existing hospital systems and her epoch-making measures of reform regarding nursing and hospital management and construction. The next step forward came soon. During the years 1860-70 Louis Pasteur was quietly studying spontaneous generation, the silkworm disease, and the disease of wine, and was laying the foundations of modern bacteriology. In 1873 Joseph Lister stated that Pasteur's researches had "furnished me with the principle upon which alone the antiseptic system can be carried out."

It is to these four persons that modern hospitals are responsible for their existence: to Morton for anesthesia; to Florence Nightingale for modern nursing; to Pasteur and Lister for antiseptics and asepsis and modern sanitation.

At the same time came the wonderful development of chemistry and physics ushering in what we are pleased to call the scientific age. Added to this, or because of this, came greater material prosperity through improved methods of agriculture, additions to the world's cultivated areas, machinery, and new developments of natural mineral resources. Cities grew in number and extent, and the modern hospital kept pace to serve the needs of these urban populations. It is impossible without too great digression and detail to consider the hospitals of the world during this period, so only the development of hospitals in America will be taken up.

The first hospital in America was established by Cortez in the City of Mexico about 1524. The French established hospitals as early as 1639 in Quebec and Montreal in 1644. It is said that a hospital was opened on Manhattan Island in 1663. Many of these hospitals have had an interrupted operation to the present and their descendants have carried on in some sort of way, but hospitals in America did not really begin until the next century. The Pennsylvania Hospital (1751-56), the Philadelphia Dispensary (1786), the New York Dispensary (1791-95), and the New York Hospital (1791) are the first hospitals that can claim consecutive and successful operation from their foundation. The present Bellevue Hospital began as a room for the sick of the Public Workhouse in 1736; it moved to a new building in 1796 and became a real hospital in 1816. In 1869 it established the first city ambulance service in the world. The Massachusetts General Hospital and the MacLean Hospital for the Insane were established in Boston in 1813. There are now 6,807 hospitals in the United States with 853,378 beds and 671,832 patients.

Sanitation in hospitals was advanced greatly by Elizabeth Fry (1840), who carried on the work begun by John Howard. Much was also accomplished by Florence Nightingale and Lord Sydney Herbert, 1861, who was Secretary of War during the Crimean War. Un-

der his orders Edmund A. Parker published a book on military hygiene and hospitals which was so far-sighted, it is said, that all the recommendations of the South African Royal Commission in 1901 had been made by Herbert and Parker 55 years before. Then followed Lord Lister (1870), Sir Douglas Galton (1893), and Sir Henry Burdett (1893), all of whom contributed toward improvement in hospital construction and management. In America, hospitals owe much to the efforts of John S. Billings who planned the Johns Hopkins Hospital as well as many others, and Herbert B. Howard who was responsible for much of the best construction at the Massachusetts General Hospital and who planned and built the Peter Bent Brigham Hospital in Boston.

Except for a normal advance in construction, hospital planning and management proceeded along much the same general lines up to 1856, when Florence Nightingale's reforms at Scutari showed the way to better things. The introduction of simple cleanliness advanced hospital care, but the bacteriological causes of hospital sepsis remained. The explanation and method of control came from Pasteur and Lister, and only then "hospital gangrene" disappeared.

From the earliest times hospitals and medical schools have been intimately connected and cooperative but usually they were separate institutions, in separate buildings and governed by separate boards of directors. Johns Hopkins perhaps sensed the trend of affairs for in his will he suggested that hospital and medical school should be combined. After careful consideration the trustees felt that public opinion would not sanction such a combination and consequently the Johns Hopkins Hospital and Medical School were placed in separate buildings although governed by an interlocking directorate. About thirty years later, in 1921, his suggestion was followed almost simultaneously by the University of Rochester, Vanderbilt University at Nashville, and the University of Colorado, all of which erected new buildings housing both medical school and hospital and established combined forms of government. This intimate combination of hospital and school seems to be the accepted system at present and has been followed by the University of Chicago, the University of Columbia, the Presbyterian hospital group in New York, and the new buildings now being erected for Duke University.

The wheel has turned; the cycle is complete. The first hospitals and medical schools were combined in the temples of Egypt and Greece. Today hospitals and medical schools form true temples of science. We may say as was said of St. Basil's famous hospital, "They rise to view like cities in themselves, the abode of charity, the treasury into which the rich pour of their wealth and the poor of their poverty. Here disease is investigated and sympathy proved."

DATES OF THE FOUNDING OF SOME FAMOUS HOSPITALS

Eastern Empire

St. Basil's, Cappadocia—369 A.D.

St. Ephraim, Edessa—375 A.D., for plague victims

St. John, Alexandria—610 A.D.

Western Europe

Fabiola, exact place unknown—Western Europe about 400 A.D.

Belisarius, Rome, Via Lata—date not exact

Caesarium, Arles—542

Childebert I, Lyons—542

St. Landry, Hôtel Dieu, Paris—641–691

Milan—777

St. Gall—820

Mt. Cenis—825

Great St. Bernard

Ecclesiastical

Hospital of the Holy Ghost, Pope Innocent III, Rome—1198

Sancto Spirito in Sassia, by the Pope, 1204

England

St. Albans—794

St. Gregory, Archbishop Lefranc—1084

St. Bartholomew's, Rahere—1177

St. Mary's, London—1197

St. Thomas—Peter, Bishop of Winchester—1215

Guy's—1724

Bedlam, Monastery of St. Mary of Bethlehem changed to a hospital—1547

America

Cortez, Mexico City—1524

Hôtel Dieu, Duchess d'Aguelon, Quebec—1639

Hôtel Dieu, Montreal—1644

General Hospital of Quebec—1693

Manhattan Island—1663

Pennsylvania Hospital—1751–56

Philadelphia Dispensary—1786

New York Dispensary—1791–95

New York Hospital—begun 1773, burned 1775, rebuilt 1791

Bellevue—room for patients in Public Workhouse 1736

Boston, Massachusetts General Hospital—1813

Special Hospitals

St. Luke's for Insane, London—1751

Quaker Asylum, York—1792 (William Tuke 1794)

Narrenthuren, Vienna—1784

Eastern Lunatic Asylum, Williamsburg, Virginia—1772

MacLean Hospital for Insane, Boston—1813

3. The Possibilities of Future Development in the Service Rendered by a Hospital to a Community, *by Andrew R. Warner, M.D.**

FUNDAMENTALLY, hospitals are one type of institution created by society for service to society. Their existence implies a need for the service and their future growth depends upon the degree of usefulness that can be developed. Beyond and above a hospital's service to the sick individuals in its beds, to the medical profession, to the cause of medical education, and to the growth of human knowledge, stands that hospital's final, resultant, real service to society as the ultimate measure of excellence. It is the whole of which all of the many other functions of a hospital are parts, important, essential, but only parts. There is yet occasionally a hospital performing only the first elementary function of a hospital—the furnishing of bed and board to the sick individual; but there are now many at the other end of the scale giving service which is the product of hands skilled in many ways and the work of several professions, at least of the nursing, the medical, the ecclesiastic, and the sociologic. These hospitals can render the greatest service to society: it is these that society will in the end elect to preserve and support.

The era of prophylactic medicine is no longer a hope: it is come, a reality in fact, though it will develop in degree. The health centers established, the more frequent routine periodic physical examinations, the work of the factory physician and social service department, and the frequent use of the visiting nurse or physician by insurance companies indicate that individuals and corporations are becoming convinced that it already pays in days of health and productive labor better than its cost. There is now a general recognition that it is better charity to keep a man from the need of a hospital bed than to care for him when in one.

The preservation of public health in all its forms is a major work for every hospital. No contribution of facts pertaining to public health problems can in any way equal the data collected by hospitals. This is due to the fact that the records are written, that both the primary and secondary diagnoses are collected together in the indexes, and that large series are rapidly collected. The poor, the people reached best by hospitals, are affected first and most by community conditions unfavorable to health. The out-patient department by its numbers is extremely sensitive to changing conditions. The diagnoses made in a day or a week are a fairly accurate picture of the state of public health in the locality, a fact just beginning to be put to use. We are the keepers of public health more than we sometimes realize.

The fields for service to public health and preventive medicine open to hospitals are as yet mostly possibilities for future development, but the proper use of our records and opportunities already promises to prevent more disease than our beds could possibly relieve with treatment. Incidentally, the record room work gets results cheaper than the ward. Is the *summum bonum* the medical profession or is it public health?

The present also reveals to us the beginnings of a recognition of our broader responsi-

* Adapted from *Tr. Am. Hosp. A.* 17:224-231, 1915.

bility to a patient. Usefulness is the measure of life and life's happiness. It may be lessened or abolished by disease and thereby bring not only dire misfortune to the individual but also a problem to society. Such a problem begins when full usefulness ends; it is solved only when usefulness is again restored. To hospitals, society assigns the solving of these problems when the individual's resources are inadequate. The limits of the hospital field are therefore from the ending of usefulness to the restoration of usefulness. Social service, as we now know it, is but the beginning of the reorganization of hospitals to assume the full responsibility for the assigned problem and a promise of further development, not a finished product. The hospital social service worker recognizes these broader limits of the hospital field in the daily task of getting someone a job and back to work, to normal life. The interval between the discharge from the hospital after an acute illness and the day the man can return to work is usually, at least, a dangerous risk, if not a serious damage to a working man. Supervision of convalescence saves too many chronic conditions, too many overstrains, and too many lives not to eventually become general. Hospitals must make the use of convalescent departments a routine: the longer stay in the wards at high cost can never stand against the far cheaper and better farm life, the open air, the sunshine, and the graded schedule of work in the garden to bring a man back to working condition. This and much more will come when the hospital's work no longer ends when the patient is "able to go home," but when he is "fit to go to work." The responsibility to furnish the most effective and the broadest service cannot now be abrogated by any hospital: it can be ignored only.

In the last few decades many medical schools have established chairs of experimental medicine and provided ample laboratory facilities for borderline work with good and sufficient results. Along with the work of these university research posts, there has come to hospitals a feeling of direct responsibility to increase the store and use of medical knowledge by actively encouraging the study of problems presented by its patients instead of passively permitting this to be done. Animal experiments done in hospitals and laboratory work to prove and to check the theories, explanations, and observations of the staff are becoming more common. It is in the hospitals that the practical clinical problems actually present themselves, and there is a growing belief that it is in the hospital that most of these will not only be solved for the day by a shrewd guess, or keen logic, but be so proven by animal experiments and other means that the work will reach and be of value to others, and a benefit to posterity.

There is another benefit from the cost of experimental work often, if not always, worth more than the knowledge gained. Hospitals are becoming progressively more and more interested in the training of young medical men for their own future use and for others. Without experimental work they are trained to depend on the say of others; with it they are trained to think and to prove. Surely the latter will produce better men. To the local dwellers a hospital is a building of brick or stone, built to care for the sick; to the world, to society, it is a group of men of a certain caliber and results of a certain worth. It pays to train men right. Lakeside has recently backed this belief by adding five men to the resident

staff and equipping a new laboratory, that thoughtful observation, study, and demonstration, or "research work" as it is often called, may be increased among them to the extent of five men's full time. By no means does this make us the leader in this particular; rather, a follower in a line that is content to look to the future for even moderate results. The clinical clerk is another evidence that hospitals are taking an active interest in medical education.

The idea of mutual cooperation between hospitals as it is developing is hopeful and prophetic. The very idea of active competition between hospitals, of a bitterness of feeling, and of any rivalry that is not simply altruistic eagerness to serve better and absolutely free from thought of gain to self, is unreservedly repulsive; it is entirely foreign to the purpose of all endowments, grants, or expressed tenets of purpose of any hospital. The public servant, institutional or individual, who reveals for an instant a selfish aim is instantly discredited. Honor and gratefulness are but the acknowledgment of debt for uncompensated service. The union of hospitals to increase the ultimate service to the community is broadening in scope. New York hospitals united to lessen waste in buying. Philadelphia hospitals united in an effort to increase the individual efficiency of the institutions. The New York dispensaries and the Cleveland hospitals have each united for the primary purpose of increasing the combined contribution of all the local institutions to the public welfare of the community, helping each to fit its work to the others and to the existing needs, eliminating overlapping and wasted energy. Surely we may look forward to the day when all hospitals shall present to society harmonious, united service, adapted with the greatest care and in absolute unselfishness to the needs of the time.

What are days and weeks spent in a hospital worth to patients and what do the "cured" and the "improved" in the discharge notes of medical and surgical histories mean? Dr. Codman of Boston has been asking these questions for some years. A few hospitals are now really trying to find out by thorough follow-up systems how beneficial the average "cure" proves to be, and to appreciate the later influence and the final effect of particular treatments. We are entering on the stage of the collection of the actual results as fundamental facts. From these there will come comparisons, deductions, lessons learned, and, based upon these, future progress in many ways. Known results can be compared with the cost; one method with another, and society will be able to buy its health more intelligently.

Many who have thought about the growth and development of the medical sciences, the shifting of the professional aim from treatment alone to individual prophylaxis, the expansion of this to the community, and who have then realized that this was simply intensified public health work, have reasoned from this conclusion and from the growing recognition that all is for service to society, that in the end the medical profession and all institutions contributing to the preservation of health "must become a function of the state." But society has other professions and other institutions existing to protect and advance itself, and the same principles of greater, broader service pervade many such. All that render good service cannot become "functions of the state" as we now understand that term. There would be nothing to do worth the while outside the state. Such a condition can be only when the

state and society become synonyms, when statecraft and that science of society are one. This may come, but it will come through the socialization of the state and its elevation to almost perfection in grasping and enacting a wiser public will, not by the extension of political control of the present type to and over the professions and institutions. Active participation by the profession and by hospitals in the solution of public health problems and the acknowledgment that the logical test of excellence is the ultimate value of the service to society will bring no crisis, no conflict with the state. Ideals and service will guarantee respect and position tomorrow just as they do today.

4. The Hospital and the Changing Social Order, *by Sister John Gabriel**

WITHIN the last two decades, or thereabouts, hospitals have undergone notable changes. Twenty-two or three years ago the hospital situation was very different from what it is today. The American Hospital Association, though organized as early as 1899, was not yet firm on its feet. It could not boast of permanent headquarters, much less of a full-time executive staff. The Catholic Hospital Association and the Protestant Hospital Association did not exist, and the first state hospital association did not come into being until some time later, when Ohio took the lead in this direction.

The number of veterans' hospitals was practically nil, and county hospitals were not as numerous or as attractive as they are at this time. There were about two-thirds as many hospitals in the country as there are now, and about one-half as many beds. The capital investment in hospital buildings at that period was probably a little less than one billion dollars, in contrast with an investment of four billion today. Organized fund-raising projects for hospital benefits were unknown, and publicity concerned with hospitals or the care of the sick was considered unethical.

The health insurance program had just been initiated in England by David Lloyd George, but such a venture did not mean much to America; she was still enjoying peace and plenty; the man of moderate means was not yet recognized as a social problem, hence the "forgotten man" was a stranger to her.

Hospital literature was very limited in the early 1900's, and what was available was not of a type to interest hospital administrators sufficiently to make them want to find out what was taking place in their own field of endeavor.

Each hospital seemed to be a law unto itself; it lived its own life; it set up its own standards; it settled its own difficulties; and it served its own community. It was satisfied with the results of its own work and the way it was doing it.

The evolution of the hospital has worked in cycles. It has had dark ages and golden ages, and dark ages again, but when in 1913 the American College of Surgeons was organized, and when five years later, in 1918, it projected its standardization program into the hospital field, a new cycle for hospitalization began that will eventually go down in history as the hospital betterment period. The Minimum Standard became a veritable constitution

* Adapted from *Hospitals* 10:17-20, Jan. 1936.

for hospitals, and standardization, reconstruction, and reorganization became the pervading purpose of the day. Disturbing though the element of standardization was to a good number of hospitals, and even though it was no smooth or easy climb to reach the ideals set forth by the Minimum Standard, nevertheless its influence became so extensive and widespread as to play an integral part in the life of the community and to make the hospital a place in which to get well and learn to live, rather than, as Browning once styled it, "a good house in which to die."

It was thought that the pinnacle of hospital evolution had been reached when the first list of approved hospitals was published and our local papers proudly announced to the public the standings of the hospitals in their vicinity. But the summit of hospital administration was not so near; its peak seems to be somewhere in the sky. The nearer we think we are to it, the farther away it appears to be.

The public accepts hospitals as charitable institutions, trusting to Divine Providence and a generous philanthropy to provide the resources for their efficient operation. In spite of important reductions in operating disbursements and the greatest economy in hospital expenditure that good care of the patient will permit, hospitals are faced with large deficits. Incomes from patients have dropped 30 per cent in the past three years, while volumes of free service have risen from 15 per cent of the total in 1929 to 60 per cent in 1934, and 70 per cent of all patients in charity clinics are being treated free of charge. In the meantime, federal and state legislation, through processing taxes and other revenue measures, have increased the cost of food and other staple commodities approximately 20 per cent.

When a bank sees its deposits decrease and its cost of operation closely approaching its earnings, it pays off its depositors, retires its stock, and goes out of business. When a private business enterprise finds it cannot longer operate with a balanced budget, it liquidates its assets and retires from the business field. Some business men will say that any institution that is not self-supporting should go out of business, but the hospital cannot do this, if it is a good hospital. Its obligation to its community is not measured by its net earnings, but by the service it renders, regardless of whether the community pays for such service or not.

It would go far toward reducing the cost of medical care to the people in the lower brackets of wage earners if the voluntary hospitals could be sure of direct subsidies from government agencies in proportion to the volume of service they render to approximately 2,000,000 indigent patients annually.

The hospital in this country is passing through a profound and significant change, a change that is generating new ideas, creating new methods, and forming new conceptions of our present social responsibility. The hospital has always been sensitive to the social, historical, and economic trends of the times, and is still ready and willing to do its share in making scientific investment useful to those who need it at a price that is reasonable, where this can be done without endangering the hospital's own stability. There is no question as to the veracity of the statement recently made by Ex-Governor Smith in reference to the place of the voluntary hospital in the city of New York. "The voluntary hospital system," said Mr. Smith, "must be preserved, because the closing of these hospitals would place

upon the city a burden that it could not carry." Could not the same statement be applied to the entire country?

Under pressure of necessity the hospital has practiced every possible kind of economy. New and much needed equipment has been denied, maintenance and repairs have been deferred, salaries have been lowered, and extra duties have been placed upon generous workers, but beyond a certain point a hospital cannot go. It is a human institution and its first interest must be to give good care to the patient at any cost.

The public is misinformed concerning the hospital. Were one to heed the cries of false prophets, one would be led to believe that the hospital is a profit-making institution. The "exorbitant hospital charges" form the theme of numerous magazine articles, the topics of papers and discussions of most health organizations, and the subject of conversation of a multitude of people who have need of hospital care.

As a matter of fact, hospital prices are not "exorbitant" when one considers that the public will cheerfully pay the price at a hotel for a room, and in addition pay for every extra service rendered, however small, while in the hospital the patient receives, in addition to his room, three meals a day and nourishment in between; if desired, general nursing care, and the services of the resident staff, as well as those of orderlies and maids, who are not looking for tips, and in many hospitals he is also given ordinary medications and a good amount of dressings, and all for the price that he would pay for a room in a hotel. But the average man resents illness and everything connected with it. He has made no provision to pay for illness; it is a gloomy subject and he does not want to think about it. It is little use to criticize the public, however; it is better to educate it by building up its confidence in the hospital, by showing how the hospital was conceived and developed by far-seeing individuals in order that lives of human beings might be made safer, longer, happier.

If the hospital of today is to have the good will of the people, it must reach out to the community and make its service available under every possible circumstance.

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CHAPTER II. HOSPITAL SERVICE

I. The Hospital, the Family Doctor, and the Patient, *by S. S. Goldwater, M.D.**

THE family doctor has been patted on the back so frequently of late that that part of his anatomy must be getting rather sore. There are two things that he can do about it: he can continue to subject himself to these well-meant attentions and can treat the painful parts in his own way (nowadays no one questions his competency to cure so simple an ailment), or, resorting to the strategy of preventive medicine, he can save himself from further injury by keeping his admirers at arm's length while he proceeds to ascertain just what it is that they wish to do for him or to him.

The issue concerning the place of the family doctor in present and future practice has been clearly drawn in the discussions that have recently taken place. In the center of the stage stands the family doctor, conservator of the highly prized personal relationship between patient and physician—the object of universal homage, but homage sometimes offered, I fear, in a manner not altogether sincere, for I have observed no marked decrease in the number of waiting patients in the anteroom of the family doctor's friend, the specialist, or any unwillingness on the part of the specialist to receive them.

At the family doctor's right hand stand those who in the name of efficiency and economy urge his absorption into the organized fabric of a glorified hospital or an octopuslike medical center, in accordance with a plan which assigns to these splendidly equipped units "responsibility for furnishing complete medical service for the local population or some section thereof," and which promises to the family doctor as a member of the responsible organization a valuable share in the "control, management and operation of the costly accessories of medicine, a division of expense for these accessories, greater efficiency, greater opportunities for work, more ease in postgraduate study and in vacations, more cooperation from his friends and neighbors, more education from constant association with others." This is certainly an enticing offer, yet its intended recipient hesitates to accept it, for at his left stand a host of warning counselors who with many manifestations of alarm urge him to resist to the bitter end the creation, the continuance, or the expansion of any and every form of organization that might deprive him of any part of his traditional liberty or lessen the intimacy of his professional relation to his patient.

In the controversial literature of the day, one does not always find a confrontation of principles as simple as this. In any formal plan for the extension of group practice or the widening of the sphere of the hospital, a loophole is usually left through which a small fraction of independent private practice may conceivably escape and survive. Similarly, even the more rigorous champions of unhampered individual practice concede the advantages of group practice in a limited area, which they reserve for the activities of specialists.

* Adapted from *Mod. Hosp.* 40:41-46, Apr. 1933.

Notwithstanding these slight concessions, the fact remains that the family doctor is being urged in opposite directions by two antagonistic schools of thought, each of which regards itself as the bearer of the only true doctrine of medical salvation.

Thus we find that the comprehensive, inclusive, community-wide organization of all varieties of necessary medical service, the advantages of which to patient and doctor are so eloquently pleaded by the Majority of the Committee on the Costs of Medical Care, is characterized by the Minority of that committee as "far-fetched and visionary." Among the Minority's objections to the health center plan which the Majority so warmly espouses are that "it would establish a medical hierarchy in every community, to dictate who might practice medicine there; it would be impossible to prevent competition, among the many such centers necessary, to assign patients to the various centers"; while "the continuous personal relationship of physician and patient would be difficult if not impossible under such conditions."

The advocates of organized group practice are asked by the Minority to bear in mind that "the majority of illnesses and injuries (about 85 per cent) are of such a nature that they can be treated efficiently by any able general practitioner with very simple equipment; in fact, the general practitioner does not need elaborate apparatus of any kind"; that "the general practitioner is quite capable of taking over many of the procedures now assumed by specialists and should do so," and that the general practitioner "must be equipped to render a good medical service to the families in which he becomes the trusted medical adviser."

Although the report of the Majority of the Committee on the Costs of Medical Care embodies the carefully stated conclusions of a large group of distinguished and public-spirited men, and is based upon volumes of evidence which should be consulted by anyone who wishes to acquaint himself with all of the facts of current medical practice, the Minority's objections to the health center plan cannot be lightly dismissed. It is becoming increasingly evident that the health center plan is not a popular one; that it does not make the practitioner's mouth water, notwithstanding his natural craving for sustenance and the extremely meager fare upon which he now subsists. However conscientiously prepared, however skillfully treated with the appetizing condiments and the tantalizing sauces of steady income and improved professional opportunities the proffered meal may be, the instinctive disposition of the family doctor is to reject it.

If, now, we turn to the dissenting or Minority report, we find that the recommendation which is most characteristic of the Minority's attitude toward the problem of general practice is "that united attempts must be made to restore the general practitioner to the central place in medical practice." A statement of that kind doesn't mean much unless it is backed up by a program, and the principal affirmative means proposed by the Minority for the accomplishment of its purpose is "the preparation of the student in the medical school the better to fill the place which he (the general practitioner) has always occupied." This recommendation is advanced in face of the fact that much of the available evidence indicates that medical practice is steadily moving beyond the general practitioner's reach as a result

of powerful social forces which a mere change of undergraduate educational emphasis can hardly be expected to control. The diet offered to the family doctor by the Minority strikes me as a meager diet indeed—a mere bread-and-water ration at best, which tends to diminish in quantity and to deteriorate in quality wherever industrial or contract practice, group clinics, university medical centers, public hospitals, pay clinics, or free dispensaries flourish.

A vital element in the situation is the actual growth of free medical service. The Minority believes, and in this belief I heartily concur, that in the medical care of the indigent, society has thrown too great a burden on the doctor, and few will be disposed to criticize its recommendation “that the government care of the indigent be expanded with the ultimate aim of relieving the medical profession,” or to question the statement that through the adoption of this policy “the income of physicians would be increased.” It is certainly true that if the government took over all the free work that doctors now carry on privately and in addition provided proper remuneration for the physicians who actually do the medical work of public hospitals and clinics, substantial benefits to the doctors would accrue. But how can a program for the further expansion of the government’s huge existing medical program be reconciled with the purpose of restoring the family doctor to a central place in the practice of medicine? How does it square with the aim of maintaining or of reestablishing personal relations between physician and patient?

In a rural community, the inhabitants being few and the indigent sick fewer, public responsibility for medical care of the poor might conceivably be discharged by designating an individual doctor to serve as the government’s agent, but in towns and cities the volume of such care soon compels resort to the methods of organized practice, and as medical organization advances, the personal relations between doctor and patient fade away.

Extremes of method in government medical care for the indigent are strikingly presented in a village some forty miles from New York City, where I live in the summer, and in the great metropolis itself. When a poor patient is admitted to the modest community hospital in the village, he is assigned to one of the village doctors (all of the members of the county medical society, by the way, have access to the hospital), and the county, through the local poormaster, pays both hospital and doctor’s bills. Here we have an instance of government medical care in which the indigent patient receives personal attention which, if the doctor is at all conscientious, does not differ materially from the care customarily bestowed on a private patient.

Now contrast this with public practice in the metropolis, where a patient of the same class would be one of a hundred admitted in a single day to a hospital containing five hundred, a thousand, or even two thousand beds. He would be placed on the service of an experienced visiting physician of respectable reputation, but, unless the case happened to be one of particular clinical interest, the actual care of the patient would probably be assigned to a youthful resident or intern who might have as many as sixty, eighty, or even a hundred patients in his charge.

If we turn from in-patient to out-patient service, we find that in New York City, Boston, Philadelphia, Buffalo, Cleveland, Chicago, Minneapolis, San Francisco, Los Angeles, and

elsewhere, public clinics vie with university medical centers in the elaborate organization of dispensary staffs whose treatment of ambulatory patients is of necessity conducted on a quantity basis. What vestige of personal relationship remains, in a huge public clinic, between the individual doctor and his innumerable patients? The expanding activity of public general hospitals and clinics, which almost universally is coupled with unpaid professional service and which involves a corresponding shrinkage in paid private practice, has not been to the advantage of the family doctor. As a rule, the doctor takes his punishment without a murmur, for unselfishness is the very essence of the profession to which he has dedicated his life and of which he strives to be a worthy member. If physicians now and then protest that they will no longer submit to exploitation, who can blame them? But the payment of medical salaries by huge public hospitals and clinics which are constantly adding to the volume of their work seems an unpromising way of avoiding the dangers of group or mass practice or of preventing nonmedical participation in the control and direction of medical practice.

Although a substantial majority of the hospital beds of the country are already government supported, so far as I know it has not been suggested by anyone that any important part of this service be discontinued (a possible exception is the suggestion that some of the services which a too generous government has been offering to veterans for nonservice-connected disabilities be abolished). And in any appraisal of the present position and future prospects of private medical practice, not only hospital service *per se* but free dispensary service must be taken into account.

There were 150 clinics in the country in 1900, 2,300 in 1910, nearly 4,000 in 1920, more than 6,000 in 1930. In 1931, 3,456 out of 6,571 clinics in the United States reported over thirty million visits; for all of the clinics in the country, including those not reporting, the number of visits in 1931 is estimated at forty million. A sharp increase in attendance at clinics maintained by the public authorities is reported in nearly every part of the country. A municipal hospital in the Middle West reports a growth in its daily out-patient service from 250 in 1931 to 800 in 1932. The out-patient department of a great municipal hospital in New England reports that daily visits averaged 900 in 1931 and nearly 1,500 in 1932. New York City experienced in 1931 an increase in dispensary attendance of nearly two million visits—equivalent to the entire growth of such attendance during the eight preceding years.

It is true that these figures in part reflect the industrial depression, but who knows when the normal earning power of the working classes will be restored or whether the restoration of prosperity, when it comes, will be followed by a corresponding restitution of private medical practice? The indefinite expansion of free public medical service on existing lines threatens the economic existence of a large part of the medical profession, and presents a problem that demands serious consideration.

Compulsory health insurance has been suggested as a means of dealing with this problem, but compulsory health insurance offers no bed of roses to the conscientious doctor, to the insured patient, or to any social-minded government that undertakes to administer the

system. The thoughtful observer of the medical aspects of our workmen's compensation law sees little to encourage him to advocate the adoption of a new and even more complicated system of governmentally supervised medical care which strews temptations in the path of doctor, patient, and public official.

However, the basic idea of health insurance, namely the principle of distributing the cost of medical care over groups of the population and over long periods of time, is perfectly sound, and in compulsory health insurance of the English pattern (inadequate and faulty as that pattern undoubtedly is) the general practitioner, freely chosen by his patient from a numerous panel of neighborhood doctors, appears to occupy a position in which he is closer to his patient than he is likely to be if he becomes a salaried employee of the state with a fixed institutional assignment in the expanded system of public hospitals and dispensaries toward which we in this country are heading today. How long will it be, I wonder, before the number of low-salaried working people receiving free medical service in our public institutions is proportionately equal to the number of English workers that come under the operation of the British compulsory health insurance act?

The field of organized medical service which the state is destined to occupy in our country embraces, as I see it, not merely the care of the penniless class but large groups of low-salaried workers, many only intermittently employed, whose means are conceded by everyone to be inadequate for the unaided purchase of proper medical care. If state aid continues to be extended in increasing volume to this group and if it is modified so as to cover the cost of the services of physicians, the area of contract medical practice will be enormously expanded. It is therefore essential that in the current discussion of medical economics, the problem of the care of the "indigent" by the government be placed in the conspicuous position to which its importance entitles it.

In the growing sphere of medical practice under government auspices, what is to be the precise role, what the public and private relations of the family doctor? How will he fare? What method of medical payment is most likely to assure reasonable remuneration, the best service to the sick, the largest freedom of opportunity to the doctor, and the widest range of choice of physician, as well as the great desideratum, the professional control of medical activities? These are questions that the medical profession must be prepared to answer in the near future.

As long as the present social economic order endures, we shall have to deal with two great social branches of medical practice. The first of these, practice under government auspices, has been mentioned, but far from adequately described; not even a classified directory of this service, extending from hospitals for the mentally ill and tuberculosis sanatoriums at one end to prenatal clinics at the other, can be presented within the limits of this paper. The other is the diminished but still important field of private practice. What are the present opportunities of the general practitioner in this second field? How can these opportunities be extended and improved? Should the public be content with the present quality of the family doctor's service? To this latter question, conflicting answers have been given.

The distinguished editor of the *Journal of the American Medical Association*, a firm believer in the function of the family doctor, recently declared that "the person of any class, if he consults his family doctor, is likely to have more than an even chance for good medical care without exploitation." Doctor Fishbein's eloquence and effectiveness as an advocate are well known, but in this instance an impartial judge would probably find that he had understated his client's case. If "more than an even chance" of getting good medical care "without exploitation" were all that the family doctor's patient could hope for, the sociologists who have become interested in medical affairs could scarcely be blamed for training their critical guns directly on the sacred citadel of medical practice.

I have already referred to the recommendation of the Majority of the Committee on the Costs of Medical Care that hospitals and medical centers extend their services into patients' homes, thus providing "complete medical care for the local population or some section thereof." Now, if group practice possesses all the virtues that are attributed to it, it is manifestly desirable that the section of the population which is excluded from its benefits should be as small as possible and preferably that there be excluded no group whatever. One may reasonably assume that this is what the committee would like to see, although it is careful to explain that anyone may remain outside of the system who chooses to do so.

The arguments for group practice—now fairly familiar to both layman and physician—are based upon two broad grounds, economy and efficiency. In my opinion, cooperative medical practice derives its special sanction not so much from its economic advantages as from the complex character of modern medicine and the number and limited application of its specialized technical skills, which make it indispensable at times, but not always. The Minority of the Committee on the Costs of Medical Care, opposed as it is to the extension of group and clinic practice, nevertheless concedes the logic of this type of organization, but would like to see group organizations restricted in number and scope, and offers as an advantageous substitute "medical care furnished by the individual physician, with the general practitioner in the central place." It asks that groups and clinics be "organized only where the nature of the situation and character of the personnel render such organization a natural development."

I confess that I am puzzled by the wording of this recommendation, for does not the "nature of the situation" everywhere render group or cooperative practice a natural development? Wherever there is a patient, a complex as well as a simple clinical problem may arise and a union of medical forces may be needed to ensure satisfactory treatment. Medicine being the many-sided science and art that it is today, group practice is not a local or intermittent but a constant and universal need.

"Groups of specialists," the Minority declares, "as distinctive organizations are very valuable for diagnosing or treating difficult or complicated cases." Is not "groups of specialists" a poorly chosen phrase? The ideal medical group is not a group of specialists but a group that includes both general practitioners and specialists. It would be nothing less than a misfortune for "groups of specialists" to form "distinctive organizations" with the general practitioner left out. This is not a mere quibble: the term employed by the Minority is not

only technically incorrect but it is employed in such a way as to summon before the mind the picture of an organization that is outside of and even opposed to the general practitioner, possessing functions apart from general practice. One ought rather to think of specialists as a group complementary to the family doctor; but even this friendlier term has an unsatisfactory connotation, for properly constituted medical groups, including specialists, are of the very essence of general practice, bone of its bone, flesh of its flesh.

Again I quote from the Minority report: ". . . for 85 per cent of illnesses which make up the family doctor's practice, better service can be given by the individual doctor in his own office than in the clinic." This statement makes it clear that patients differ in their diseases but it fails to remind us that doctors differ in ability, and in so doing it slurs over an important fact. It may be quite true that Doctor X can stand on his own feet with respect to 85 per cent of his cases and needs support only in connection with the remaining 15 per cent; but Doctor Y might do better by his patients if he called in a consultant in 20 per cent of his cases; while Doctor Z would be guilty of poor judgment or of bad faith if he did not admit his lack of ability to deal unassisted with even a larger proportion of his patients. It is impossible to devise any system which will make family doctors equally efficient, but it may be possible to promote the maintenance of sound professional standards by creating the most favorable conditions of practice.

In the conditioning of medical practice, the practitioner's early medical training is in point of time the first potent influence. Since the Majority and Minority agree that this training can be improved, I am content to leave it to them jointly to settle the matter with the medical schools. Let us assume, then, that the content and method of undergraduate instruction are still an unfinished chapter and that further progress can be made in that direction. In all probability the actual treatment of the sick is influenced far more by habits formed after graduation than by the knowledge the practitioner acquires during his undergraduate days. This, at any rate, is my own belief, and hence I say that the key to efficient medical practice today is in the hands of the hospitals, that it is the hospital that chiefly determines the plane upon which, in a given community, medicine shall be practiced.

Nor is the power of the hospital to influence the standards of local medical practice confined to practice within its walls. Given two practitioners of equal talent and like preliminary education, the first associated with a worthy hospital, the second lacking such a connection, the one who enjoys constant contact with a progressive clinical group will soon outshine the other. In the interest of the quality of his service alone, quite apart from any considerations of an economic character, the general practitioner requires a hospital connection. For the family doctor, the hospital holds a whole bag of useful tricks. Its daily gossip on clinical subjects keeps him alert, its unusual cases widen his horizon, its laboratory facilities are a potent aid in diagnosis, its clinical conferences are a running commentary on the virtues and the limitations of modern practice. All patients do not need hospital or group service, but it is the family doctor who must select the patient who should be given its benefits, and if the family doctor has no connection with a hospital or clinic organization, he will fully understand neither the power nor the decided limitations of group

practice. Even if the doctor's judgment is sound, he will be more reluctant to refer his patient to a hospital or diagnostic clinic with which he has no connection than to one with which he is associated and to which he can turn with the knowledge that its staff will loyally collaborate with him and will make no attempt to supplant him.

The physician who enjoys a proper institutional association avoids the danger of becoming careless and superficial in his clinical methods. With the whole range of clinical and laboratory medicine spread out before him, he acquires self-confidence in that part of the field which he can personally manage, and readily turns to others for help where his own equipment is inadequate, knowing that he can do so without losing contact with his patient. Nothing is more indispensable to the success of any effort to restore the general practitioner to a central place in medical practice than the creation of right relations between the family doctor and the hospital. Recognition of the need of a hospital connection for every practitioner should be a controlling factor in all community hospital organization, for the practitioner cannot do his job competently unless he enjoys the advantages of a healthy and stimulating professional environment. I should like to point out here that the association of family doctor and hospital which I am discussing is a free association which would not deprive the family doctor of his independence, in which respect it differs from the unified service of the closely knit organization envisaged in the Majority report as I understand it.

Notwithstanding the steady encroachments of public medicine—encroachments that are likely to be carried far beyond their present limits unless the cost of medical care for patients of small income is more evenly distributed under some plan of periodic payment in which the medical profession will consent to participate—there remains a considerable volume of individual medical practice for the continuance of which there is much to be said. Physicians will not give up any part of this practice if they can manage to retain it, but economic pressure has already driven a wedge between the family doctor and an important fraction of his patients, and this pressure shows no signs of relaxing. As more and more patients are cut off from their family doctors, they are taken over and assimilated by the hospitals and clinics of a benevolent government and its voluntary allies.

Of the great volume of practice which has already been taken over by public and semi-public institutions, little is likely to be restored to the family doctor; but the terms of future medical participation in this great mass of practice are subject to negotiation, and public interest demands a settlement fair to the medical profession. Otherwise the service will deteriorate and the patients will suffer. Each year, talented college graduates weigh carefully the relative advantages of alternative careers, and the best among them do not always elect medicine.

Is it possible for hospitals to fulfill their functions and to prosper without taking away the livelihood of the general practitioner? I think it is; but efforts to preserve for the family doctor the practice that remains in his hands will not be aided by fostering antagonism between him and the hospital. In a struggle for existence between individual practice and institutional medicine the latter would have the upper hand, hence the friends of the

family doctor should do everything possible to avoid such a struggle and should seek to unite these two complementary units of medical practice in an amicable partnership.

From such a partnership, founded upon the acknowledgment by each partner of the social usefulness and the distinctive qualifications of the other, the family doctor and his patients would derive great benefit. The hospital's participation should be based in part on frank recognition of the public's interest in competent private practice, and should signify the hospital's acceptance of the proper role of group medicine in relation to individual private practice; namely, to supply whatever needed clinical and laboratory service the family doctor is unable to supply unaided. This is, of course, a special function of the hospital, apart from its normal duty of providing shelter, comfort, convenience, safety, and certain economies in medical and nursing care to patients whose illnesses are not complicated but whose home surroundings are inadequate to their needs.

The suggested cooperation between the hospital and the family doctor in complicated illnesses might be called the associated free practice of medicine. It would take one form in a small community, another in a great city.

2. Excerpts from the Study on Medical Education, by Willard C. Rappleye, M.D.*

A BRIEF glance at the historical development of medical education in this country not only reveals the emergency character of its early history, but also explains some of the present difficulties which have grown out of efforts to correct the deficiencies of the recent past.

Physicians in the early American colonies were usually clergymen for whom medicine was a companion profession, taught as a part of the preparation in England for service in the Church. For more than a century and a half there was no university north of Mexico City in which medicine was taught. Very few students could afford to go abroad to study medicine. From necessity the only method of training physicians was by apprenticeship under practicing doctors and the clergy. The young student attached himself to a preceptor, and by observation, constant companionship, and some reading, but chiefly by imitation of his master, learned the art of medical practice. There was no semblance of scientific training in the process.

Medical education has concerned itself in the past almost exclusively with the training of physicians and with contributions of new knowledge regarding health and disease. The medical needs, in the light of knowledge which existed then, were relatively simple. The social organization was also simple. Leaders in the profession were fully aware of the problems of their day and endeavored to train students in keeping with current knowledge and practice.

The rapid growth in knowledge and the changes in social organization in recent years have greatly complicated the problems of medical service. The rapidity of the change and the more widespread public recognition of the place of health in individual, community,

* Adapted from *Mod. Hosp.* 40:75-78, Apr. 1933.

and national life have emphasized the importance of securing a more satisfactory distribution and utilization of the trained personnel in relation to the needs and the social organization.

No difficulty is experienced in demonstrating that physical and mental health is the greatest asset of a nation as well as of an individual. It is one of the necessities of everyday life. The prosperity and happiness of a people are largely dependent upon mental and physical vigor. Ill health and its effects are recognized widely as one of the major causes of dependency and unemployment. The most pressing health problem is to devise a permanent and comprehensive program of conserving health and treating illness and disability which will become an essential part of the cooperative endeavor known as civilization.

There is general agreement that the greatest health problem in the country at the moment is that of securing an adequate distribution of modern medical services to the entire population at a reasonable cost to the individual and the community. It is clear that present-day knowledge of the diagnosis, treatment, and prevention of disease is far in advance of its application to the needs. This lag is not the fault of the medical profession but is a characteristic social phenomenon which has always existed. It is accentuated now because of the rapidity with which knowledge has grown in recent years. The gap between what is known and what is utilized cannot be entirely closed, of course, if medical knowledge continues to expand, but it can be narrowed considerably.

The problem of medical care is exceedingly complex. Before substantial progress can be made toward its solution it will be necessary to secure a reasonably clear definition of the present and probable needs of the immediate future for medical services. These vary considerably in the different sections of the country because of local conditions. The second step in solving the problem is a determination of the provisions necessary to meet the needs, including the essential facilities such as hospitals and laboratories and the requisite personnel—physicians, dentists, public health officers, nurses, dietitians, laboratory technicians, social service workers, and others. It is important that the program designed to meet the situation should be based on practical consideration of available facilities, personnel, and resources, and not be presented as either a purely academic speculation or a function necessarily to be performed by the government.

Defects in the methods of medical practice in this country are widely recognized, but there are fundamental advantages in the American scheme which ought to be retained and extended. The solution of the problem is not the destruction of the present system and the substitution of a paternalistic plan ill adapted to the philosophy of American life, but rather the evolution of a pattern which will embrace the desirable features of present methods and the correction of their defects.

It is highly important that the facilities suggested should be adapted properly to the needs to be met in each community and that the professional groups be integrated to meet their public responsibilities. The distribution, organization, education, and continuation training of personnel and the effective correlation of facilities and professional workers are

requisite to proper functioning of the health program in any area. These several features can be provided satisfactorily only through regional planning by those in possession of the knowledge and resources required to meet this large public problem.

There is some danger that public thinking has been maneuvered into an unfortunate position recently in regard to this whole matter, for emphasis is being placed upon the present organization and cost of medical care, rather than upon the support of an adequate medical service of high quality. Inasmuch as a high quality of medical service can be provided only by trained personnel, the educational features of any program become paramount. They concern themselves not only with the recruiting and training of physicians, nurses, social workers, hospital executives, public health officers, sanitarians, dietitians, physical therapists, laboratory technicians, and others essential to a health service, but also with a program of continuation education which will keep these various professional groups abreast of new knowledge and methods.

Following a reasonably accurate determination of the needs and the facilities and personnel required, the approximate cost of a satisfactory program for a large portion of the population can be calculated. The methods of meeting the cost can be adapted to the economic status of those receiving the services. There are some families in every community who can pay the full cost of care from current income or savings without serious inconvenience. A large proportion of the population of most communities can pay for the costs of the ordinary illnesses encountered, but many of this group cannot or do not provide for the expensive items of serious illness, hospital care, specialized treatment, or prolonged convalescence. For these expensive items special provisions must be made and already exist in many areas in tax-supported or private clinics, hospitals, and other community organizations. A third element of the population cannot provide for any form of medical care. The community should, and in many places does, make full provision for them. In such programs physicians everywhere make a large contribution of their time and energy. The methods of providing the financial support by individual payments, by collective payments, or by taxation can be left to local determination. There is a considerable experience in this field already in existence.

Owing to the great diversity of local social and economic conditions and the varying degrees of local public opinion regarding sound health policies, no single or artificial program can be imposed upon a given community. The effort must be to educate rather than to legislate. The problems are as yet essentially local and practical, not general and theoretical.

The time lost because of illness averages between seven and nine days per employed person and represents about 3 per cent of the usual working year. It is estimated that the 36,000,000 wage earners in the country lose about 250,000,000 work days and the 24,000,000 school children lose about 175,000,000 days in school each year from illness. The financial loss to the country as a whole represented by the lost earning power and reduced production totals well over two billion dollars a year, equivalent to one-half the cost of maintaining the national government. The economic features associated with preventable and

premature deaths represent a further large sum. The number of work days and the amount of wages lost because of illness, while very large, are far exceeded, however, by casual and enforced idleness from other causes. It has not been possible to keep the healthy people employed fully even in times of prosperity.

Current medical practice has taken on certain characteristics which resemble those of contemporary industrial life. Considerable emphasis is being placed upon organizations as a means of providing mass production in medical services. Efforts are made to standardize procedures partly as a reflection of methods in the field of industry. These efforts are based in many instances upon the fundamental fallacy that the human being, who is the unit of medical service, can be regarded as a uniform, standardized organism. The contrary is known to be the case inasmuch as no two individuals are alike, and no two even with the same disorder react in exactly the same way. Sound medical practice requires careful study of the health needs of each individual—physical, psychic, and social.

The lowered birth rate, the better control and treatment of the diseases of childhood, and reduced immigration promise to modify considerably the age composition of the population of the future. In 1860 approximately 9 per cent of the population was fifty years of age or over. At present the proportion is above 16 per cent. If the present control of the fatal diseases of childhood and vigilance in organized public health efforts are maintained, it will be over 25 per cent in 1975. The problems of health and medical practice of the future will increasingly be those of adulthood and old age rather than those of childhood. This will mean a further increase in the degenerative and chronic diseases, such as cancer and the diseases of the heart, blood vessels, brain, and kidneys. These diseases now cause 60 per cent of deaths in persons over forty years of age. The remarkable increase in the average length of life during the last fifty years, to which so much publicity has been given, has been due almost entirely to the control of the diseases of childhood. The mortality rate among children under five years of age has been reduced over 60 per cent since 1900. Life expectancy after adulthood has increased only moderately during the last fifty years.

There are many factors influencing the various efforts to provide medical care for the people of this country. The expansion of our ideas of what constitutes adequate care and efforts to provide it for the entire population are among the most important. More advance has been made in scientific knowledge in the last sixty years than during the preceding twenty centuries. The growth of knowledge has been so rapid that time has not permitted its full dissemination in the medical profession, particularly to an extent that gives the individual physician a critical judgment of the value of some of the newer methods which are used or advocated. The people, vaguely aware of this knowledge, naturally desire to have it made available to them without realizing that much of it is highly technical, costly, and of real value only in specific instances. There is a general desire that all practical phases of medical knowledge be within reach of everyone, although the public is not prepared to provide all the necessary resources. Individuals who have an unusual amount of illness are often unable to pay for complete medical care because the infrequent and expensive items cannot be provided for in the daily budgets of most families. The public, through

either private philanthropy or tax-supported agencies, now provides such services for many who cannot pay. Even for the ordinary illnesses, however, very few families make provisions in advance but expect to pay for their care after they recover.

There is still much mysticism about illness, and at least some remnants of the earlier concepts of disease remain. In the Middle Ages the invalid was one peculiarly blessed because he gave opportunity to others to practice Christian grace. The fear of disease, the idea that it is punishment for sins committed, the concept of social inferiority, and the resentment which most people feel toward the inconveniences, worries, and financial demands incidental to sickness and for which they do not feel responsible make difficult a rational approach to these risks of everyday living. In recent years, however, an appreciation of the fact that health problems are part and parcel of everyday life has directed attention toward making community provisions for meeting those serious and costly illnesses and emergencies which the individual cannot anticipate. Society is assuming the obligation of providing the means of restoring the sick individual to normal health when he is unable to do so.

There is necessity for a clearer conception by the profession as well as by the public of the different needs of individual patients, and a willingness on the part of the latter to pay adequately for a basic nonspecialized medical service, which often is far more important and valuable than the services of specialists. This is particularly true in matters of early diagnosis, treatment, and prevention, although such a basic service is frequently less obvious to the patient. A concentration of the medical profession and the public upon a medical service aimed at the early diagnosis, treatment, and prevention of disease would be a fundamental readjustment in the health program which, in the long run, would be beneficial to everyone concerned and would lower the cost of medical care through the prevention of illnesses that are likely to produce disability.

Some plan to meet our medical needs will be worked out, possibly on a basis which will be suited to the institutions, state of public opinion, and conditions found here. As in most forms of social legislation, we shall probably have to go through the long and difficult process of public education. Efforts to solve the problem in local areas have been initiated and should serve as demonstrations for the public and the profession. It is to be hoped that the experiences abroad and the mistakes made in the earlier efforts can be avoided in this country. The uncertainties in the situation, as mentioned earlier, are linked with the close identification of all such social legislation with political institutions, a fact which makes the development of a governmentally supervised plan in this country particularly unpromising at present. If sickness insurance ultimately becomes a reality, perhaps we may have the wisdom to set it up under an organization created for the specific purpose and made up of nonpolitical appointees, somewhat like the boards of regents of the state universities and other governmental bodies.

There is need for the coordination of various professional groups and facilities in each community for the modern practice of medicine, in order to obviate the inadequacies of individual efforts and to secure collective expressions of policy and the active participation

of all the professional groups in the joint responsibilities. The hospital represents the common ground upon which the patient, the community, and the professional groups meet; it provides many of the specialized and expensive facilities needed for modern medical care; it embodies the general type of professional and lay organization which, with proper amplification, can best meet the problems presented; it occupies a strategic position in the community to coordinate the various professional, social, and economic activities dealing with sickness, the training of physicians and other health workers, and the education of the local community in health matters. It is particularly adapted to the centralization of medical, health, and educational activities in rural communities where the population is scattered, the number of persons needing specialized facilities is small, resources are limited, and the necessity of providing inducements which will attract well-trained physicians, dentists, nurses, and other workers is pressing.

It is likely that present methods of employing physicians for the care of the sick in hospitals and public clinics will be modified. The care of indigent patients, long considered the responsibility of the physician, is coming to be regarded as a proper charge against the community. Doctors should be compensated for their work in caring for the indigent sick, although their employment by hospitals or the community is likely to bring about a modification of the completely independent status which they enjoy at the present time.

3. Medical Practice and Hospitalization, *by S. S. Goldwater, M.D.**

THE following statement is prompted by the claim that a hospital which employs a roentgenologist, a pathologist, or any other physician on a salary basis practices medicine in violation of law or of professional ethics, and by the further demand that hospitals be prohibited by law from providing medical services under any and all circumstances.

Wherever in the following discussion the term "hospital" is used, it is intended to apply to hospitals of the nonprofit or community type and not to business corporations conducting hospitals for profit. No attempt will be made here to defend profiteering on medical service. A hospital is justified in organizing, participating in, and facilitating the business transactions which are incidental to medical practice only when it adheres strictly to the nonprofit principle.

An attempt will be made to answer the following questions: What is a hospital and what are its proper functions? What is the essence of medical practice? What are the legal and ethical rights of the physicians practicing in institutions? Is the salaried employment of a physician in a hospital necessarily injurious to the public and to the medical profession? Is it desirable or practicable to forbid the employment of salaried physicians in nonprofit hospitals under the exigent and complex conditions of modern medical practice?

A hospital is an institution for the care of the sick and infirm. Hospital care is the care of the sick or infirm in a hospital. Hospitalization is the provision of hospital care. Law, custom, and common sense require the hospital to furnish reasonably adequate care. The serv-

* Adapted from *Hospitals* 12:11-16, July 1938.

ices included in reasonably adequate hospital care are determined by the state of contemporary medical science, by standards prevailing in the practice of the art of medicine, by nursing standards established by law or local custom, and by legally defined or generally accepted requirements for the safety, protection, and comfort of the sick in hospitals or for the satisfaction of their essential needs. The adequacy of hospital care may be weighed by the test of negligence. If the omission of an act or the failure to satisfy a need of a hospital patient would constitute negligence, either legally or logically, it is incumbent on the hospital to perform the act or to satisfy the need.

There is no dispute about the obligation of a hospital to supply proper shelter, nursing, food, dressings, and ordinary room service; the current discussion revolves about the question of the participation of the hospital in certain auxiliary medical services which are bound up with or closely related to medical practice.

The essence of medical practice is diagnosis and treatment. Hospital care divorced from diagnosis and treatment is inconceivable, but no institution can "diagnose, treat, operate, or prescribe." Making a diagnosis, or ordering or administering treatment, is a personal act. Medicine is practiced *in* a hospital, never *by* a hospital. When the courts say that a public or charitable hospital may practice medicine because it is expressly organized for that purpose, they can only mean that such hospitals, to the extent authorized by law, may employ or appoint physicians to treat the sick. The hospital employs or appoints the physician; the physician diagnoses, prescribes, or operates. The prevailing rule is that a hospital physician is responsible for his own professional acts unless specifically exempted by law; the hospital which employs or appoints a physician is only required in law to exercise due care in his selection. The legal exemption of physicians from responsibility for the results of their acts in hospitals is rare. The courts seem to know quite well who "practices medicine"; so does the discriminating patient.

The act of diagnosis or of treatment is a personal act; such acts, constituting the essence of medical practice, are of the same professional nature whether performed gratuitously, for an individual fee directly paid by the patient, or as part of a salaried service. Confusion arises when the business of medicine (the pay of the physician) and the art or profession of medicine (the act of diagnosing, prescribing, or treating) are indiscriminately spoken of as medical practice. The conditions of the practice of medicine as an art are, in the United States, invariably fixed by law; practicing physicians may donate their services if they choose, or may exact such fees or salaries as they see fit.

The term "practice through another" has been used in some states as descriptive of a function of a charitable hospital or a public dispensary, but it is the "other," the physician, who actually practices, not the hospital or dispensary. The theory that an institution can take the place of a thinking and acting human being is presumably based on a legal fiction which under certain circumstances regards a corporation as a "person." We must not permit ourselves to be confused concerning the naked facts of medical service by a fiction of this kind.

Some physicians, charitably inclined, perform gratuitous services in hospitals; some are

paid for their hospital services directly by patients; some are compensated by hospitals out of funds collected by the hospital from patients, others by hospitals out of monies derived from voluntary contributions or from taxes. The services rendered by physicians to the sick in all cases are or should be those required by patients without regard to the special business relationship.

It is impracticable to carry on the work of a modern general hospital with a completely uncompensated staff. Notwithstanding the great volume of medical work that is freely given, it is not equal to all that patients need or all that responsible physicians require. Medical salaries, negligible in most community hospitals a generation ago, now represent a substantial and unavoidable item of expenditure in hospital administration. Full-time physicians (residents and others) and many part-time physicians performing time-consuming indispensable hospital services, cannot be expected to exist without compensation for such services, and investigation will show that the universal substitution of individual professional fees for hospital salaries is not practicable. The unattached family physician or staff member who sends his patient to a hospital for a "work-up" would soon rebel if a separate medical fee were demanded for each medical service rendered to his patient.

A hospital, required to give adequate care, must arrange for medical service, and it can only do so with the cooperation of medical practitioners. Cooperation between hospitals and physicians authorized to practice medicine assumes many forms. A conceivable form of cooperation, but one which is encountered only in hospitals of the most primitive type (usually proprietary), is that in which a privately compensated physician individually performs all the medical service the patient receives, the hospital furnishing only lodging, room service, board, dressings, medicines, and nursing. The dangers inherent in hospital service as primitive as this are recognized by the medical profession and by law; medical organizations and local government authorities, undertaking to define minimum standards of a safe and acceptable hospital, demand that hospitals furnish or arrange for competent auxiliary professional services. Typical requirements include resident physicians, qualified laboratory diagnosticians, and certain categories of therapeutic specialists.

Sharply contrasting with the primitive hospital, which is really only a boarding house for the sick, is the government or university or research hospital in which all or nearly all medical service is performed by salaried physicians. A mixture of paid and unpaid staffs in varying proportions characterizes most community hospitals.

If the employment of a physician by a hospital for any medical purpose is the practice of medicine by the hospital, the Federal Government, every state in the Union, many hundreds of cities and counties, state and private universities, ecclesiastical hospitals of many denominations, and nonsectarian community hospitals are engaged in the practice of medicine.

A hospital which employs a salaried physician may in some cases donate, in other cases charge for, identical medical services. If it be held that the hospital practices medicine only when it collects a fee for medical service, not when it employs physicians and donates their services gratuitously, then the argument really is that the collection of a fee is the essence or

determinant of the practice of medicine—a palpable absurdity. As has already been said, a hospital never actually practices medicine; in the nature of the case, a hospital cannot diagnose, prescribe, operate, or treat, quite apart from any legal restriction or ethical consideration.

While in any common-sense view a hospital does not, notwithstanding the phraseology of state law, “practice medicine through another” since medicine as an art is practiced only by the physician and not by the hospital which is permitted to employ him, it might be said that a physician “practices medicine through another” when he reports his opinion on a laboratory finding or a clinical condition to another physician who in turn reports the findings or conclusions to the patient and gives the necessary orders. These proceedings, clinical throughout, are clearly distinguishable from the corporate or administrative acts of a charitable hospital. The details of the collaboration of the hospital may be easily traced, but no act of the hospital supplants or supersedes the diagnostic or practical art of the physician.

A physician whose compensation is received from an employer other than the patient, whether payment is made in the form of a fee for a single service or as part of a salary for multiple services, does not “practice medicine through another” if he gives his professional opinion directly to or maintains direct and independent professional relations with the patient. The making of a diagnosis or the recommendation or performance of any therapeutic procedure completes, in essence, the act of medical practice. Academic freedom, professional prestige, professional dignity, and all the legitimate rights and privileges of medical practice can be and are maintained under varied forms of organizational and administrative business arrangement. The legal safeguards which surround medical practice aim at the protection of the public and are not intended to foster a monopoly for practitioners who believe in and adhere to a particular business method.

To the distinction between medical practice and business transactions incidental to it must be added the distinction between the practice of medicine and technical aids to medical practice. Under circumstances and conditions determined by medical men, tests are made by laboratory experts and nurses who report their findings to the clinician, the responsible practitioner in charge of the case; the physician in charge then makes the diagnosis. Reports of chemical or bacteriological tests influence the judgment of the practitioner but do not take its place, nor are they on the same intellectual or professional plane. So far as I know, no serious objection has ever been raised against the employment of highly trained nonmedical assistants for the making of scientific tests. From the standpoint of medical art, the most abstruse and complicated chemical laboratory test is of the same order of evidence as the taking of the patient’s temperature with the aid of a clinical thermometer—a diagnostic aid universally rendered by nurses with complete medical approval.

Physicians employ aids in therapy as well as in diagnosis. Actual treatment is given when a nurse administers a drug prescribed by a physician or when x-ray therapy is applied by a technician under medical direction and control, but the courts have justly held that the performance of these controlled procedures by workers subordinate to and directed by

physicians does not constitute the practice of medicine. Similar services are performed by nonmedical assistants in doctors' private offices, and no serious objection is raised. Can it be seriously maintained that a hospital may employ nonmedical personnel for these services without practicing medicine, but that when identical services are performed in a hospital by paid medical personnel the hospital is engaged in the practice of medicine? Or that a hospital may properly be the vendor of a technical service when the performer of the service is a layman, but may not act in the identical capacity when the performer of the service is a medical graduate?

A hospital might conceivably collect a charge for inclusive hospital care of a patient and might retain an undue part of the proceeds, thus depriving medical staff workers of their just reward. It is alleged, and it is probably true, that such profiteering has occurred. The remedy for the abuse lies in a more equitable business arrangement, not in the destruction of types of hospital organization that have been developed in response to the demands of the medical profession itself and in deference to felt social needs.

Putting aside questions of law and principle and limiting attention to the naked demand that every fee charged for diagnosis and treatment be paid directly to the participating physician, one may ask whether it is practicable to conduct an adequate hospital service in the manner proposed. The complexity of modern medical service apparently presents insuperable obstacles to the proposal.

How many physicians actually participate or may participate in the hospital care of a single patient? Examination of a series of clinical histories in a well-conducted hospital revealed that in some cases as many as twelve or fifteen separate medical functions were in some cases performed in the process of diagnosis alone; the number of required services is further increased by therapeutic indications. Services of a medical nature required in hospital practice may be supplied directly and exclusively by physicians; others of fact-finding character with clinical bearing may, as I have already shown, be furnished by nonmedical personnel, who in turn are supervised by physicians. Some of the required services are grave and time consuming, some are slight and of brief duration, but all reflect the demands of medical practitioners and are presumed to be indispensable to effective practice. In a typical neurological case, diagnosis alone required the procedures listed in Table 1. The list is far from reflecting completely the variety of individual medical services that play a part in modern hospital practice. A fairly complete picture of the service a hospital is expected to furnish in addition to board, lodging, dressings, and nursing is presented in Table 2. It will be observed that the services required are without exception services which have been incorporated in hospital practice at medical request and to meet medical needs.

On the theory that in order to protect medical rights a hospital must rigidly avoid every form of organization and business procedure that involves intermediation between patient and physician whether for purposes of administrative convenience or in order to simplify, expedite, economize, or enhance the effectiveness of group medical practice, it would be necessary for the patient to establish direct professional and business relations with every physician, of whatever rank or kind, participating in any of the diagnostic or therapeutic

procedures noted above. Even the employment of a salaried resident physician would be prohibited if the theory were consistently applied. How many patients would care to enter a hospital and submit to the confusion and agony of indefinitely extended professional relations, not to speak of the exaction of an alarming array of individual fees? Is it desirable that the utilization of organized hospital service, the value of which intelligent people recognize, be thus discouraged? I suspect that the intolerable conditions that would be created under the multiple-fee system would give an enormous impetus to the demand for the organization of all hospital medical practice by the state. Is that what the advocates of the multiple-fee system want?

The necessities of modern medicine call for extensive cooperation in hospital practice—cooperation among physicians on the one hand and between physicians and the hospital on the other. The complexity of modern medical practice, as the foregoing citations from hospital case histories show, is such that a high degree of physical, professional, and business organization is required if hospitals are to furnish adequate medical care. The indefinite multiplication of individual professional fees would make hospitals unworkable, and is not essential to the preservation of the integrity of medical practice.

The brilliant success of hospital service subscription plans on a nonprofit basis indicates the fulfillment of a public need. To be successful, such plans must supply adequate hospital care. They can do so without destroying tested forms of hospital organization, without injustice to medical practitioners, without sacrificing any medical right or privilege. To obtain the approval of the American Hospital Association, hospital service plans, which serve both the public and the profession, must be conducted on a nonprofit basis; they are expected to make their procedures conform to the wishes of the attending medical staffs of

TABLE I. DIAGNOSTIC PROCEDURES IN A NEUROLOGICAL CASE

1. History and physical examination	Physician
2. Blood microscopic examination	Technician and supervisory physician
3. Blood Wassermann	Technician and supervisory physician
4. Blood chemistry	Technician and supervisory physician
5. Urinalysis	Technician and supervisory physician
6. Eye consultation	Physician
7. Basal metabolism	Technician and supervisory physician
8. Electrocardiograph	Technician and supervisory physician
9. Ear examination	Physician
10. Nose and throat examination	Physician
11. Neurologist—examination	Physician
12. X-ray	Physician
13. Fluoroscopy	Physician
14. X-ray skull	Physician
15, 16, 17. Reviewed and summarized	Technician and supervisory physician
Group consultation	Physicians (3)

TABLE 2

Patient's history, general and special	Intern	Sup. phys.
Physical examination, general, including blood pressure and examination of special organs	Intern	Sup. phys.
Urinalysis, routine and special kidney function tests	Intern	Sup. phys.
Blood Wassermann	Technician	Sup. phys.
Blood count including differential, coagulation and bleeding time, sedimentation, etc.	Intern	Sup. phys.
Blood chemistry, routine and special, icteric index, Vandenberg, and other liver functional tests	Technician	Sup. phys.
Gastric analysis, feces, bile, and duodenal analysis	Intern	Sup. phys.
Sputum examinations	Intern	Sup. phys.
Spinal fluid: Wassermann, colloidal gold, and chemistry	Technician	Sup. phys.
Serology, agglutination, and complement fixation tests for typhoid, blood transfusion, etc.	Technician	Sup. phys.
Transudates and exudates	Technician	Sup. phys.
Biopsy and operative specimens	Technician	Sup. phys.
Bacteriological examinations, pus, pleural, pericardial, nose and throat, pneumococcus typing, etc.	Technician	Sup. phys.
Basal metabolism	Technician	Sup. phys.
Electrocardiogram		Physician
X-ray and fluoroscopy		Physician
Special examinations:		
Bronchoscopy, bronchogram, cystoscopy, cystogram		Physician
Duodenoscopy, endoscopy, esophagoscopy, gastroscopy		Physician
Laryngoscopy, otoscopy, otoscopy, pharyngoscopy		Physician
Proctoscopy, sigmoidoscopy, pyelogram		Physician
Encephalogram, ventriculogram, etc.		Physician
Operations and anesthesia:		
Major, minor, dental treatments, blood transfusions	Intern	Physician
Consultations:		
Urology, neurology, ophthalmology, laryngology		Physician
Dermatology, gastroenterology, gynecology, orthopedic		Physician
Cardiac, metabolic, pediatrics, obstetrics, surgery, etc.		Physician
Treatment:		
Dietary prescription, physiotherapy, thermotherapy, electrotherapy, hydrotherapy, etc.	Technician	Physician

their respective communities and they must "not interfere with existing relations between physicians and hospitals or between physicians and patients."

There is no good reason why an ethical plan which is acceptable to the physicians of a particular city should be modified to conform to the preference of physicians in other localities. Compensation for medical service is a business matter which concerns both doctors and the public. Hospitals are justified in entering into any arrangement for the payment of fees which is acceptable to the members of their staffs, provided it involves neither exploitation nor coercion and promotes adequate medical care. If hospital administrators believe, as I do, that the direct payment of a separate medical fee to every physician contributing directly or indirectly to diagnosis or treatment would diminish hospital efficiency, would obstruct adequate medical care, and would embarrass physicians who are primarily responsible for treatment and on whom patients directly depend, they not only have the right to oppose but are under moral obligation to combat the multiple-fee system.

Responsibility for making hospital care adequate is not the responsibility of the trustees

or lay branch of hospital administration alone; it is equally the responsibility of hospital medical staffs and of the medical profession.

Hospitals do not, hospitals cannot, practice medicine; hospitals can and must participate in the organization and businesslike administration of hospital medical practice in order to meet the demands of their visiting staffs and fulfill their obligation to provide adequate hospital care. It is inconceivable that an intelligent medical profession will refuse to co-operate with hospitals that are eager to serve the public and that propose to do so in a manner which rigidly excludes profiteering and which is not only acceptable to but is actually responsive to the needs of their staff members.

4. Should the General Hospital Treat Mental and Contagious Cases? *by F. G. Carter, M.D.**

WHETHER we who are in charge of general hospitals want them or not, we are at one time or another confronted with the task of caring for mental, tuberculous, and contagious cases because of circumstances over which we have no control. Any of these disease conditions may exhibit their first recognized symptoms during the period when the patients afflicted with them are undergoing treatment in the hospital for other maladies. Admitting diagnoses may be erroneous and the patient who entered the hospital as a case of pneumonia may be a victim of far-advanced pulmonary tuberculosis. A spirit of compassion may have moved us to receive the patient who is too sick to be turned away, although ordinarily our doors are closed to those suffering from this particular ailment. Zealous doctors have been known at times (and this isn't entirely to their discredit) to stoop to little "fibs" to obtain for their patients the care they know is needed. These experiences are familiar to all of us, yet we seem to be not so much concerned with the problem of giving such patients adequate care as we are with ridding hospitals of them as promptly as possible.

There must be something about these patients that makes them undesirable and we should be interested in discovering just what that something is. Those in the mental group may be noisy, destructive, untidy, unsociable, and generally uncooperative. They may use obscene language or they may have homicidal or suicidal tendencies. Generally speaking, they are not persons with whom mentally normal people like to associate. Tuberculous and contagious patients may transmit their afflictions to attendants, visitors, or other patients. These difficulties are not insurmountable and in themselves do not seem to be adequate reasons for excluding such cases when we know that we can overcome the objections cited through proper construction, proper regulations concerning the handling of patients, and proper training in the technique of caring for them.

What then is the background for our refusal, in most instances, to accept these three groups of patients? If we dig down deep enough into our innermost thoughts, I think we shall all have to admit that the crux of the whole situation is found in the respect we have for the traditional fears and prejudices that exist against these diseases in the minds of

* Adapted from *Mod. Hosp.* 39:45-48, July 1932.

those we serve or expect to serve. We are afraid to take such cases for fear of what will happen at the box office. This state of affairs cannot be treated lightly or ignored, even though most thinking hospital people are convinced of the feasibility of satisfactorily caring for these three groups of patients for short periods at least in the general hospital. Public opinion, regardless of whether or not it is based on sound premises, is a formidable foe and it would be foolhardy for us to attempt to change it unless we are prepared to show that with modern methods in modern hospitals there is no factual basis for the fears and prejudices of past generations and that there are, moreover, numerous advantages to be gained by the public, the patient, the physician, the nurse, and the hospital from a program that would provide care in the general hospital for mental, tuberculous, and contagious patients.

Hospitals really have only two major objectives: the care of the sick and the education and training of all who come in contact with them. Anything that advances these interests advances the interests of the public, for no one knows when he may become a patient and if he does he wants the best possible care and service. In return for the support accorded, the hospital can make no greater contribution to its community than a better general level of hospital, medical, and nursing practice, and it is with this matter that the public is primarily concerned. They want to be assured of the best care obtainable when they or their loved ones need it and they are interested in the medical and hospital aspects of public health and of public safety.

We have been told repeatedly that the policies of the hospital must be dictated by the "good of the patient," yet we discriminate ruthlessly against large portions of the sick of the country who, though they are able and willing to pay for proper care, are outcasts as far as obtaining conveniently located hospital service is concerned. A few weeks or months of sympathetic and competent attention at a time when they need it most might restore them to normal health and lives of usefulness. A few weeks or months of neglect may condemn them to death or even worse. Furthermore, these groups of patients are just as much in need of varied medical attendance as any other group, and they can best obtain the benefits of consultation with representatives of all the medical and surgical specialties in the general hospital. The care of these patients would increase the educational values of hospitalization for both patients and public. They would learn to know and to advertise the importance of early diagnosis and would come to understand accepted methods of preventing the spread of disease. Under proper management (and no institution should undertake this program unless its officials thoroughly understand and are willing to carry out faithfully the principles of proper management) the welfare of other patients would not be jeopardized.

In our medical assemblies much has been said of the importance of early diagnosis and treatment, but the medical profession will never become qualified to carry such a program to its greatest fruition until such time as its interest is stimulated generally through opportunities to study the diseases for which early diagnosis and treatment hold so much for the future. The antituberculosis campaign has made more progress in the last twenty-five years than in all of the centuries preceding, but its effectiveness is falling short of its possibilities

because we are not training all of our physicians for active participation in this work by making material for study available to them. With the tuberculin skin test, the x-ray, the clinical laboratory, and volumes of clinical experience available, I can't help voicing the feeling that we are on the threshold of the greatest conquest in all history. In my own and other communities we are doing tuberculin skin tests on high school seniors each year. It seems to be well established that those reacting positively to the test have had a tuberculous infection at some time. The vast majority have recovered from this infection without even knowing that they had it, but among the positive reactors we may look for the active cases, so we x-ray their chests and find them.

Of what avail is this work if the general hospitals refuse to accept the active cases for isolation and treatment and the suspicious cases for observation and study? Many patients refuse to go to tuberculosis sanatoriums because they feel that by so doing they are stigmatized, but they will gladly go to general hospitals. For similar reasons, many of the mildly mental cases refuse to enter hospitals for the mentally ill, although they would willingly submit to treatment in hospitals of their choice.

The educational obligations of hospitals have not been sufficiently stressed. The groundwork for a life of medical practice is laid in the medical school, but the most potent force for the education of the physician is found in the hospitals of the country. If we are to return to our benefactors better trained, better educated, better qualified physicians, more intelligent nurses, and more efficient hospitals, we must open our doors to all diseases to the end that all of us may have broader developing influences and greater incentives to the study of disease in a generic as well as a specific sense.

Progress in any field depends upon widespread, bit-by-bit application of known facts to the unknown, with constant realignment and remarshaling of forces. As the process advances, new concepts are formulated, new sciences are evolved, the strategy of attack changes, incentives multiply, and superior results are achieved. In American medicine and American hospitals, have we been sufficiently cognizant of our weaknesses and our opportunities? Have we contributed as rapidly and as generously as we might to the progress of medical science by making our hospitals laboratories for the advancement of knowledge concerning all the aspects of the care of all those who are sick?

The training of a nurse is not complete until she understands the principles of caring for mental, tuberculous, and contagious cases; and, without patients requiring the types of care involved in these groups, no hospital, in my opinion, can offer a well-rounded course of nurses' training. None of our obligations is more binding or more neglected than that of teaching methods of preventing the dissemination of disease. That this knowledge is ours to command is evidenced by the experience of modern contagious hospitals in preventing cross infections. The well-trained nurse, by reason of her numerous contacts, is perhaps the one who is best fitted to carry on this important specialized work.

It is true that many of the cases in at least two of the groups under consideration are chronic. In this connection it may be said that most acute cases are either self-limited or are amenable to special forms of therapy. The ones that need our help are the chronics, and as

long as we continue to pursue a "capture and control" theory of treatment they will never get it. The handful of men and women who are devoting their lives to this work need assistance, and this will come when we create broader opportunities for the study of these diseases.

The precedent for accepting in the general hospital the group of patients under consideration has already been set, and it is to the pioneers in this work that we must turn for the evidence which will break down the fears and prejudices that exist in the public mind. I know of one community of about 100,000 population in which there are two excellent private hospitals taking care of practically all of the hospital needs of the city. Both agreed to accept tuberculosis and contagious diseases. Both were well equipped to handle them properly. The public was offered no alternative and is being educated secondarily. The decision to accept or reject the group of cases in question was simply one of "do or don't" in this particular city. All communities, however, are not so fortunately situated.

Where there are many hospitals, one hospital can ill afford to risk the loss of its clientele by embarking upon such a program alone. Local conditions and local strategy will have to determine the approach. If this program is to be undertaken, the initiative must come from the smaller communities having only one or two hospitals. Once under way, their experience will be drawn upon by the larger cities in carrying out educational programs as a preliminary to the introduction of similar policies concerning the admission of mental, tuberculous, and contagious patients to their own institution.

It may be emphasized, then, that if general hospitals are to be general in fact as well as in name; if prejudices and fears based only upon tradition and superstition are to be relegated to the scrap heap where they belong; if we are interested in offering elective hospital service to a large group whom we now seek only to reject or eject and who are now outcasts as far as obtaining care and treatment in hospitals of their own choice is concerned; if we are to raise the general level of hospital, medical, and nursing service through proper emphasis upon the educational function of the hospital; if we are to educate the public in matters of health; if we are to cease stigmatizing the patients and families of these groups; if we are to serve community interests efficiently; if we are seeking methods of balancing our budgets; if we are interested in keeping the government from expanding its hospital interests; if we honestly believe that "he profits most who serves best," then we can only answer in the affirmative the question, "Should general hospitals extend their services to mental, tuberculous, and contagious patients?"

5. The Hospital Survey, by *William Henry Walsh, M.D.**

Just what a hospital survey is and what its scope should be are extremely hazy in the minds of many. Unfortunately, also, while some surveys have been thorough, complete, and eminently satisfactory, others have been hastily conducted, superficial in scope, and quite valueless to the sponsors. In view of this situation, it would seem desirable to set

* Adapted from *Bull. Am. Hosp. A.* 9:44-51, Oct. 1935.

forth a few of the principles involved for the benefit of those hospital executives and trustees who may not be familiar with the methods and objectives of the procedure as well as for those others whose unfavorable experience may have provoked a critical attitude. There are, of course, various types of surveys designed to meet specific demands, as, for instance, the investigation of community hospital facilities preceding a building or expansion program, but for the present we will consider only the individual hospital survey, leaving the community survey for another occasion.

The standards governing the administration and professional performance advocated by the various national organizations concerned with the institutional care and treatment of the sick have become so complicated that hospital trustees and even executives find difficulty in correctly interpreting requirements, and confusion inevitably results. The laudable efforts of administrators to inaugurate and enforce these standards frequently create opposition from members of the staff and others who are not familiar with the objectives in view and who sometimes honestly believe that the methods and procedures advocated are merely passing fads. To meet this situation it is of inestimable value to the executive and helpful to the institution to adopt some means whereby a complete analysis of the service of the hospital can be made from time to time which should faithfully set forth constructive criticism of the methods in vogue and practical recommendations for modification or improvement. The hospital survey when properly conducted by a qualified investigator is the best known means to accomplish that end.

A hospital survey is designed to offer a complete, detailed, and unprejudiced appraisal of the conduct and condition of the entire plant. It can be most effective when every department of the hospital and all of its activities are subjected to a careful inspection by one who is familiar with the high standards maintained by our best hospitals and who, by reason of scientific training and administrative experience, can render an intelligent interpretation of the facts ascertained, with such judicious deductions as can be made therefrom.

To determine the exact condition of the affairs of an industry or business enterprise certain procedures are commonly recognized as necessary at periodic intervals, such, for instance, as the auditing of accounts, the taking of stock, the appraisal of assets and liabilities, and the estimation of the cost and quality of production. Assuming a hospital to be a humanitarian enterprise partly supported by trust funds and conducted upon business principles, it naturally follows that the same safeguards and precautions employed by a commercial undertaking to ascertain the efficiency of operation and economic status should be as imperatively applicable. The products of the hospital are generally conceded to be the cured patient, the proficient doctor, the well-trained nurse, and educational propaganda for the prevention of disease in the community. The evaluation of the output of the hospital differs from that of many of the industries in so far as *quality* production is more to be desired than quantity. If this statement is true, it would therefore seem wise and expedient, in appraising the output of a hospital and the efficiency of its management, to examine carefully the *quality* of the service as well as the amount and cost.

It is obvious that no superficial examination of the operation of an institution can reveal

the efficiency or adequacy of the service rendered, for, in addition to the verification of the existence of the equipment and personnel specified as essential by the various agencies that have been instrumental in raising the standards of hospitals, it becomes necessary to study and analyze the method of *utilizing* these facilities by a checking up of technique and a study of the records and the methods of keeping them—in short, by critical and personal observation of the human element and the plant in actual operation over a reasonable period of time.

An effective survey of clinical performance contemplates the keen analysis by a trained professional observer of such significant details as unaccountable deaths, infections, unsuccessful operations, maternal and infant morbidity and mortality, a high rate of hospital days per patient, mistaken diagnoses, postoperative pulmonary complications, incoordination of services, irregular staff attendance, and many other leads whose investigation may offer clues to the quality of scientific service rendered and the extent to which the hospital staff is meeting its professional obligations.

The scientific aspects of a hospital may be adversely affected and progress impeded by maladministration as evidenced by an unreasonable deficit, insufficient charges for compensation cases, inexact knowledge of the distribution of expense, absence of community support and interest, excessive cost of supplies, inadequate or unsuitable equipment, dangerous fire hazards, lack of discipline, low morale—these and many other conditions when encountered and critically scrutinized by the trained investigator will furnish clues for the determination of the efficiency of administration and the propriety of the institution's policy.

A complete survey should include an examination of the following phases of the hospital's work:

Control of institution: incorporation, trustees, constitution and by-laws.

Administration: executive officer, executive staff, qualifications, functions, prerogatives.

Professional staff organization: consulting, visiting, courtesy, interns, constitution and by-laws.

Professional service: procedures and technique, division of services, rules and regulations, consultations, attendance.

Clinical records: personnel, accuracy, adequacy, nomenclature, filing system, utilization.

Pathological and bacteriological departments: personnel, records, technique, equipment, consultations.

Radiological department: personnel, equipment, records, consultations.

Physical therapy department: personnel, equipment, records, utilization.

Pharmacy: personnel, methods, records.

Out-patient department and service: personnel, system, equipment, records.

Training school and nursing service: personnel, curriculum, budget, rules and regulations, physical examinations, immunization.

Social service: personnel, scope, policy, records.

Housekeeping: personnel, methods.

Commissary, kitchen, and dietary departments: personnel, equipment, system, records.

Accounting system and methods: budget, audit, insurance, banking, investments.

Purchase, storage, and distribution: personnel, methods, records.

Laundry and linen: personnel, equipment, methods.

Buildings, grounds, water supply, sewerage, roads: general condition, adequacy, fire protection, future development.

Power, light, and heat.

Transportation.

General policy and morale.

In order to accomplish the most successful survey it should be conducted, when possible, in intimate and amicable cooperation with the administrator of the institution, as the practical experience of the "man on the job" is of inestimable value in explaining the many variants in his particular problem. What may seem to the visitor, ignorant of local conditions, a deplorable state of affairs, may in that special case be the best possible way out of peculiar and otherwise insurmountable difficulties. However valuable may be the special training and detached viewpoint of the inspector, and however phenomenal may be his ability to hit upon the exact solution of each problem presented, his report is valueless unless the recommendations therein are capable of practical application.

A thorough survey of the medium-sized hospital, covering all of the departments above mentioned, requires at least one full week; in some cases where serious trouble exists, two weeks or more of study may be required. A shorter period may suffice when only special parts of the hospital are to be investigated, although as a rule it is best to have a complete survey since the departments are so closely interrelated that to discern faults in one it becomes necessary to carefully examine all those related to it.

Unfortunately, the need for a hospital survey is not likely to be appreciated until things begin to go wrong or a crisis arises, when realization begins to dawn upon those concerned that the counsel of an outside adviser might be beneficial. It is extremely difficult to conduct a survey at a time of local disturbance or when an institution is under fire, since at such times a feeling of unrest pervades the atmosphere; the staff, personnel, and even the patients are nervous and upset, and because of these inevitable conditions the true picture of the situation becomes blurred and it is almost impossible to accurately visualize the normal condition of the institution. Moreover, if a survey is proposed at a time when the hospital is under criticism, there is likely to be ground for suspicion that the procedure is simply a gesture to gain public approval and that those selected to make the inspection are more or less partisan and prejudiced in favor of the officials engaging them.

The effectiveness of an institutional survey is greatest when it is conducted as a normal, routine procedure at a time when things are running smoothly, thereby providing unquestionable evidence that all concerned are voluntarily seeking a critical analysis of performance and that they have nothing to fear from such an unbiased appraisal.

In preparation for the survey the hospital administrator should be requested to assemble certain data and material for the perusal of the investigator, with the understanding that

the information thus secured may be checked for accuracy during the course of the survey. The following is a summarized outline of the preliminary data which, if assembled prior to the commencement of the survey, will save time and materially aid the investigator.

Summary Outline of Data Required Prior to Survey

1. Annual reports for the past five years, showing for each year: a) total number of patients admitted; b) number of hospital days; c) average stay in hospital; d) per capita diem cost; e) total cost of operation, showing distribution; f) total income, with sources; g) total deaths and mortality rate; h) percentage of autopsies; i) percentage of occupancy each year.

2. Census for [given date] midnight, giving the following information: a) distribution by clinical classification (medical, surgical, obstetrical, etc.); b) distribution by economic classification (rate paid by each, or free); c) number of days in hospital on census day.

3. Capacity of the hospital: a) by economic classification (private, semiprivate, ward); b) by clinical classification (medical, surgical, obstetrical, bassinets, etc.).

4. Out-patient department: a) number of patients admitted; b) origin of patients (city, county, outside); c) cost of maintenance.

5. The following documents should be available: a) historical sketch; b) incorporation and by-laws of corporation; c) by-laws, rules and regulations of the hospital; d) copies of standing orders; e) minutes of the board; f) minutes of the staff; g) data on all insurance carried (amounts and rates); h) copy of payroll for last three months; i) list of members of board, with addresses; j) list of members of staff, with assignments and addresses.

6. A complete list of all employees of the institution, showing salaries, wages or fees paid, and a statement of the duty of each, with daily period of employment.

The question naturally arises: who should make hospital surveys? The unequivocal answer is a seasoned hospital administrator of equable temperament, with sound judgment, who is capable of collecting and investigating all of the available facts relevant to the inquiry in an open-minded, unbiased manner, and the capacity for drawing only such conclusions therefrom as the observations fully justify.

It must be frankly conceded that there are inherent dangers in a hospital survey, the avoidance of which demands the exercise of a fine degree of tact and diplomacy on the part of the surveyor. It is therefore unwise to entrust such a task to the inexperienced novice or one who, however well endowed with the detective faculty, does not possess the measure of sound scientific training and experience essential for the discerning discrimination, the rational interpretation, and the prudent application of the data collected.

A report embracing every phase of the survey with conclusions and recommendations should be submitted to the hospital trustees as soon as possible after the inquiry has been completed and, after the board has had an opportunity thoroughly to digest the report, the surveyor must be prepared to appear personally before the board and the staff to support the observations, criticisms, and recommendations offered.

The report should be written in such a simple, clear, and direct style as to be readily intelligible to the lay board and to the entire community in the event of publication. Matters of minor importance capable of correction by the hospital executive may well be pointed out during the course of the survey and mention of them omitted from the report. When major deviations from normal practice prejudicial to the institution and its patients are encountered, there should be no hesitancy in plainly stating the facts and their significance—but remember that once a report is submitted, particularly in the case of a public institution, its contents may travel far and wide. The truth should be told without equivocation but in language that will indicate a constructive and helpful spirit, rather than a desire to exhibit the profundity of the specialized knowledge of the surveyor.

Because of the necessity for economy of time and money it will ordinarily be impossible to make any extended comment in the report upon those phases of the hospital's activities which are meritorious and deserve commendation; in these instances, however, care must be taken in the introduction of the report to mention such omission so as to avoid the distorted picture likely to be envisaged by those reading only critical comment.

In concluding this rather brief exposition, it may be said that the objective of a survey is the betterment of conditions, the correction of deviations from generally accepted standards, and the alignment of the institution with those hospitals enjoying the highest rating and the largest measure of community support. The subsequent accomplishment of these aims is the true criterion of a survey's effectiveness.

6. Some Lessons from the Hospital Survey for New York, by *Haven Emerson, M.D.**

WE seem to be now at the stage of contemplation, answering of questions, and taking to heart lessons learned from two years and a half of study of that most intricate social utility created to apply the medical sciences for care of the sick among the largest urban aggregate of population in human history. Following are some of the lessons learned or confirmed from the consideration of the findings of the Hospital Survey for New York.

In considering the institutions and agencies devoted to the care of the sick, whether from the point of view of government or private philanthropy, in the interest of the patients or that of solicitous friends or family, with the individual practitioner in mind or education in medical and allied professions, we can no longer meet with economy and efficiency the higher possibilities of the art and science of medicine in hospitals alone as they have been conceived and conducted in the past. Although the hospitals of the New York metropolitan area represent 91 per cent of the total investment in facilities for organized care of the sick, and all the homes for convalescents and the chronically ill, the independent dispensaries, visiting nurse services, industrial medical services, home medical care, and fund-raising agencies combined represent but 9 per cent, this tenth of the gross investment

* Adapted from *Hospitals* 11:11-17, Nov. 1937.

is related to indispensable auxiliaries, of growing dimensions and concern both to the sick and to the public which pays.

The general hospital is destined to hold always the key position as the central and distributing powerhouse for all varieties of diagnostic and therapeutic skills and resources, whether human or mechanical, required by the sick, momentarily as it were or permanently for the few whose life is possible only within call of nurse and resident physician. The general hospital rather than the special will be increasingly the institution of preference on account of the advantages of readily available collaboration among consultants and that wide variety of techniques and judgments best developed where every variety of patient and disease is adequately provided for. With the probable exception of permanently ill mental patients and of most of the tuberculous, all types of patients, whether neurological, eye, ear, nose and throat, orthopedic, maternity, or children, including those with communicable diseases, can be better cared for, and more economically, in a comprehensive general hospital than in hospitals limited to special types of disease.

As a corollary it appears that large hospitals of approximately 500 beds are more useful in urban communities of 200,000 or more than are hospitals of 200 beds or less. Occupancy percentages largely determine patient-day costs, and occupancy is more apt to be maintained at a high level where all varieties of illness are provided for and where the professional staff includes representatives of each specialty in medicine and surgery, than where certain types of patients must be turned away because of lack of some particular professional skill or technical equipment. Small hospitals often cannot justify the acquisition of expensive apparatus rarely used, or attract all kinds of specialists to their staffs.

Dispensary services provided by philanthropy or government, independent of a general or special hospital, are of less use to the community and develop more professional weaknesses and inadequacies than do those operated as integral parts of the administrative unit of a general hospital by members of the medical staff of the hospital. This applies particularly to the independent dispensaries operated by departments of health for tuberculosis, venereal diseases, prenatal care, etc. Both patients and attending staff suffer from the independent status of a dispensary because of the lack of such background and professional affiliation as can be had only through the organized staff of a hospital.

When two or more hospitals and allied institutions and agencies serve a community or region, some form of permanent planning board or council, primarily concerned with capital outlays, the economies of central purchasing, and avoidance of duplicating or competing services, appears essential to avoid waste or inadequacy of facilities. Only through the exercise of public spirit and sound judgment by a group of men and women, more concerned with the necessities of their community than with institutional dominance and ambition, can gross waste in capital investment and operating costs be consistently reduced for the taxpayer and voluntary contributor, and for the patient.

Increasing demands upon the attending staffs of hospitals for care of nonpaying patients make necessary, especially for those on dispensary duty and for the young assistants on

ward duty, some payment to physicians doing noneducational repetitive and routine services for the indigent sick. Of 3,151 attending physicians in New York City on out-patient services only, but 109 or 3.5 per cent were paid in 1935, and of the 18,636 positions on hospital staffs in New York City the occupants were paid some salary in only 8.3 per cent of the cases.

To meet the obligations which the advancing resources of the medical sciences offer us, it is likely that from \$35 to \$60 per capita will have to be invested by any urban community in land, buildings, and equipment for the use of institutions and agencies caring for the sick. At present the property investment of the 11,000,000 people of the New York metropolitan area in institutions for the sick amounts to \$49.91 per capita, that of the 7,000,000 people of New York City being \$56.93 per capita and that of the 4,000,000 in the adjacent seven counties \$35.51.

While the situation elsewhere in the United States may vary widely with the age or maturity of the community, its position as an educational center, the demands upon it by commerce and industry, its rate of growth, its wealth and spirit of initiative, and its political life, philanthropy will probably be found to have borne the largest share of the gross investment, in our experience 64 per cent, while government has provided 31 per cent and proprietary interests 5 per cent.

Based on experience with 71,000 hospital beds and 7,000 nursery bassinets, in the matter of their use on an annual basis, and upon evidence from various sources of adequate provision for the sick, it appears that not more than 4.5 beds per 1,000 of population are needed for general medical and surgical patients, the 4.27 in the New York metropolitan area as a whole, the 4.57 in New York City, and the 3.65 in the area outside of New York City being apparently sufficient. The very definite overcrowding of certain governmental hospitals and the under-use of considerable pay and part-pay facilities in some voluntary hospitals are evidence of bad judgment and injudicious institutional planning rather than of a disproportion in the provision of beds per unit of population as a whole. The ratio in the borough of Manhattan of 9.69 hospital beds for general care per 1,000 of population represents not an ideal or a present necessity so much as an accumulation of resources under the pressure of educational demands, exalted estimates of future growth and of wealth beyond the usual expectation of other communities. This centralization of more than double the usual ratio in a borough unlikely to maintain its present population must be thought of as a liability and a warning rather than as necessary, desirable, or resulting from intelligent foresight or scientific planning.

For children, the ratio usually quoted as expressing adequacy, i.e., five beds for each 10,000 of the population, is exactly met by the metropolitan area outside New York City and is slightly exceeded in New York City itself with 6.1 such beds per 10,000, again Manhattan showing a very high ratio of 12.9 per 10,000. This is ample in view of steady reduction in proportion of children in the population.

In spite of the fact that in New York City an average of only 1026 of the 1498 beds for communicable diseases are actually used for this purpose, there is no evidence of insuffi-

ciency of such beds, even though the ratio of beds to population is two instead of the usually recommended five per 10,000 of population. In the area outside New York City there is a more generous provision of such beds up to a ratio of 4.2 per 10,000.

For the tuberculous, New York City provides barely one bed per death from this disease per annum; it needs desperately 1.5, and should have for the most effective application of our present knowledge of prevention as many as 2 beds per annual death. The ratio of 1.7 beds per annual death in the outside area closely approaches the ideal. Any inability to give immediate, prolonged, and, if necessary, free hospital care to a patient with tuberculosis, particularly if he has positive sputum, constitutes a costly error in community planning and will increase the incidence of the disease. Every urban community in the United States and Canada should have available at least 1.5 and preferably 2 beds for each annual death from tuberculosis. There is no other category of patients except those suffering from mental disease who are so overcrowded and lacking in the best the medical profession can give them as are the tuberculous of the City of New York.

In the New York metropolitan area and in most states of the Union there is inadequate provision in hospitals for mental patients. We find at present an overcrowding of 17 per cent beyond the normal bed capacity of the state hospitals for mental disease. While the present rate of increase in admissions to mental hospitals is not expected to continue during the next two decades, it is obvious that a very considerable increase in state hospital capacity for mental patients is needed now.

As the most effective way of reducing the demand for hospital care, the provision of medical and nursing services for the sick in their homes seems likely to produce the best results. It is believed probable that approximately 5 per cent of patients now admitted to the wards of general hospitals could receive all the medical and nursing care their condition calls for if an extern medical service were organized under the staff of a general hospital and if the services of visiting nurses were provided for at public expense, as public charge patients are paid for in wards of voluntary hospitals. While the extent of such medical and nursing extension must remain problematical until thoroughly tested, there is ample evidence at present that the community could use to advantage and with economy and avoidance of much hospital care at least twice as many nurses as are now employed by the voluntary nursing associations in the metropolitan area, or the equivalent of one visiting nurse for each 2,500 of the population, a ratio found attainable and effective in some other communities.

An organized ambulance service appears desirable in any community to meet the transportation needs of both voluntary and governmental hospitals. Provision of this kind is lacking in the area outside New York City and is not at all universal in the cities of the United States.

While the ratio of convalescent beds is 7.1 to 100,000 population in the United States as a whole and 53.9 in Great Britain and 59.5 for New York City, the population outside New York City is but ill served in this respect.

Unless there are at least 50 convalescent beds to each 100,000 population it is quite cer-

tain that sickness costs will be unnecessarily high in a community by reason of holding patients in general and special hospitals longer than their condition actually requires because they are not yet fit to resume the obligations and conditions of their own homes. The lower capital outlay per bed and an operating cost of about one-half or less per patient-day than in a general hospital makes the convalescent home a necessity from the economic point of view, as it is desirable from the medical.

No one can predict the exact extent of needs for chronically ill patients, but the increasing average age of the population and the high proportion now living into the decades when the infirmities of age and middle life are likely to call for prolonged or continuous hospital service of some kind make an expansion for such patients seem clearly indicated. Between now and 1960 it is probable that almost 10,000 additional institutional beds should be provided for the chronically ill in the New York metropolitan area. The overcrowded and neglected conditions of the aged and infirm in public institutions in or near most large cities in the United States are proper cause of reproach.

On the basis of our Survey experience, 1.7 per cent of the total wealth of the population, or \$536,000,000, is invested in property concerned with care of the sick, of which 54 per cent is in voluntary, 40 in governmental, and 6 in proprietary institutions. There are abundant reasons for encouraging the continuance of the present dual system of hospitals, the voluntary and the governmental, with perhaps a gradual increase in investment in tax-supported institutions until in another twenty-five years this is equal to the property investment in voluntary hospitals.

It is estimated that by 1960 the population of the New York metropolitan area will be about seventeen and a half million, an increase of 63.2 per cent, and that a 64.6 per cent increase in hospital beds will be required (45,824 beds). Besides the estimated number of additional beds there will have to be replacement of beds on account of depreciation and obsolescence of existing buildings and equipment (33,209 beds). If there is provided suitable control through some coordinating or planning body to prevent wasteful, superfluous, and competing capital outlay there will be needed for new and replacement beds a property investment for hospitals in the next twenty-five years of \$537,037,600 (\$320,292,300 for new and \$216,745,300 for replacement beds), at the rate of \$7,000 a bed for new and \$6,500 for replacement beds. The heaviest burden should be undertaken in the next six years at the rate of \$28,000,000 a year, which does not seem impracticable in view of the fact that property investment in hospitals in the metropolitan area amounted to approximately \$20,000,000 a year in the four years 1931-34.

If to the new and replacement property investment in hospitals there is added the estimated needs of new and replacement beds for convalescent and chronically ill patients and for visiting nurse facilities, the total investment from 1935 to 1960 will amount to \$607,216,300.

Taking the new property investment together with the present property investment in all facilities for organized care of the sick in the New York metropolitan area, this would represent a per capita investment for the expected population of 1960 of \$52.32, compared

with the per capita investment today of \$49.91 for the entire area and of \$56.93 for the present population of New York City.

We should be unreasonable and lacking in both conviction and imagination if we did not believe in this provision for the sick, and act with necessary foresight to achieve it. While increasing success in efforts at prevention of diseases can be relied upon to lower to an irreducible minimum those found actually to be preventable, there is reason to expect that the application of medical science through the institutions and agencies which society and government have already found indispensable will be required in 1960 as in 1937. It is unlikely that any other application of personal savings and public appropriation of tax monies will bring greater satisfaction to individuals and to the community than will this estimated investment for care of the sick. By no other token or index is contemporary society better measured than through its willingness to see that every useful resource of the medical sciences for the accurate and helpful diagnosis and treatment of disease is made available to those who need it.

The most important lesson that, it appears to me, has been learned from the Hospital Survey for New York is that the cost of care of the sick is too much for the sick alone to carry. The well should expect to pay for the care of the sick. The great benefits of voluntary collective thrift and a reasonable regard for the expected and inevitable hazards of life combine to persuade each of us to set aside while in health and in our years of productive ability those sums which will secure for us good care in illness. No single device of organization to facilitate individual investment in institutional care of sickness promises so much as the prepayment plan now so well established among the voluntary hospitals of many of our cities, and generally in Great Britain.

7. The Small General Hospital, *by W. S. Rankin, M.D.**

My subject is stated in physical terms; my discussion will be in functional terms. Your interest is not in the size of hospitals *per se* but in their management. The line of cleavage between small and large general hospitals, I believe, will appear in the light of discussion most distinct at the level of the 100-bed hospital. For that reason, I am using the term "the small general hospital" to refer to hospitals of a hundred beds and less. Such hospitals occupy a most important place in the field of general hospitals, for two reasons: first, 75 per cent of all general hospitals are of a 100-bed capacity and less; second, these smaller hospitals are in greater need of conferences, of discussions of their problems, than the larger hospitals that can command administrative personnel of larger experience.

In what important respects does the administration of a 50-bed hospital differ from that of a 500-bed hospital? Receipts and disbursements, accounting, are very much alike in the two. The treatment of pneumonia, of appendicitis, of a woman in labor, should be practically identical. The difference between the two is more external than internal. The two hospitals serve very different types of communities. The important difference in the two

* Adapted from *Hospitals* 10:48-52, Oct. 1936.

communities is in *available* personnel, for the board of directors, for the staff, for administrative positions.

The 500-bed hospital is located in a metropolitan center of 500,000 people. In so large a population there are many intelligent and successful people who have acquired a special interest in hospitals. They have had interesting personal experiences in hospitals, their parents were members of hospital boards, their fathers were physicians or surgeons, their children are engaged as directors or nurses in hospital work, they have business connections through which they have become interested in the operation of hospitals. The 500-bed hospital not only has excellent material available for its board of directors, but it can command it. It is a well-known, highly respected institution. A place on its board of directors is both a social distinction and an opportunity for service.

The 50-bed hospital is located in a rural center of from 10,000 to 15,000 people. Good material available for the board of trustees, people with an intelligent and special interest in hospitals, is limited. The hospital is a new institution; it has only partially established itself. Those personal elements which inspired and developed a special interest in a connection with a large hospital are largely absent or embryonic in the small community. Moreover, hospital directorships are unknown and unappreciated. In short, the small hospital neither has available nor can it command the type of directors that it so much needs in its early and, comparatively speaking, feeble existence. It must be content with good men, men of character and successful in their small business enterprises, who accept their call to service more as an obligation than as an opportunity, men with a complaisant, passive, undeveloped interest in hospital problems rather than an understanding and active interest. They know how to interpret a balance sheet but not mortality rates.

The remedy for this lack of interest and understanding of the problems of the small hospital by its board of directors is a superintendent, a chief of staff, a staff sufficiently wide awake and resourceful to organize and carry through a well-thought-out course of instruction for the directors, a course of instruction designed to develop an understanding and an appreciation of the professional problems of a hospital.

Related to the difficulty of obtaining and developing a good board of directors for the small hospital is that of tenure of directorship. Once an efficient board is found, it ought to be possible to hold on to them through the provision of a law or charter permitting long service through reappointment or reelection.

What has been said about the availability of material for a board of directors in a large as compared with a small hospital applies with additional emphasis to the medical staff. For the large hospital in the metropolitan center such material is abundant; for the small hospital in the rural community it is limited. The 500-bed hospital in a city of 500,000 population has a thousand doctors from which to select its staff; the small hospital of 50 beds in the town of 10,000 to 15,000 people, in a county with a total population of 40,000, has from 25 to 40 doctors from which to select its staff. Among the thousand physicians from which the large hospital selects its staff, specialization and professional attainment offer all that is

desirable in staff competency; among the 25 to 40 doctors from which the small hospital must choose its staff, 25 to 35 per cent of them have never had hospital training or experience. Of the professional group, 12 to 15 have had from eighteen months to two years of postgraduate hospital experience. One, possibly two, of the doctors have had as much as three years' training exclusively in surgery. There may be one, possibly two, physicians who in training and in the selection of their cases are qualified as internists. There may or may not be a pediatrician. A radiologist will usually be available. A pathologist will not be part of the staff.

The large hospital, under the very nature of things, must have a closed staff. The small hospital in the small country town must treat all physicians alike and, therefore, have an open staff. This is true because the small hospital, far more than the large hospital, is dependent upon the undivided support of the community, and to discriminate in the treatment of physicians is to invite division.

This last statement brings me to the important subject of staff control. To be effective, staff control is dependent to a large extent upon how desirable a position on the hospital staff is—upon what it means in prestige, practice, income. Membership on the staff of a large hospital in a large city means much to the individual members. The staff is a closed staff. It is hand picked from a large group of physicians. Membership on such a staff is a professional distinction. It means a great deal not only in the privileges which it affords, but in the indirect recommendation of the doctor to the public. The physician will submit to fairly complete supervision and control in order to obtain and retain membership on the staff of a large hospital. Membership on the staff of a small hospital means comparatively little to the individual physician. The staff is an open staff. All doctors in good standing in the county medical societies are members. There is little distinction in membership.

The doctor in the urban center is bridle-wise to group control of all sorts; the doctor of the rural community is more dictator than disciple. He is more controller than controlled. He feels that the hospital is more dependent upon his good will and influence than he upon the hospital. Under these conditions, it is impossible to exercise the control over the open staff of a small hospital that may be exercised over a closed staff of a large hospital.

Staff control is of a legislative and executive character. Legislative control resides in the board of directors and the staff itself. Executive control rests in the superintendent. The superintendent who overlooks this distinction is headed for trouble. Rules of conduct for the staff are responsibilities of the board of directors and the staff itself. The board of directors are usually the incorporators. They hold title to the hospital. They say who may and who may not have the privileges of the hospital. Their responsibility is primary. The professional staff exercises delegated powers—powers delegated to them by the directors. The staff's responsibility is secondary. In the large hospital with its selected, closed staff composed of physicians really trained in hospital practice, the staff may and should exercise fairly complete control of its members; in the small hospital with its open staff of unbroken hospital colts, staff control can be delegated only in small measure and must be re-

tained, therefore, largely within the board of directors. In the one case, we have a staff mature in hospital procedures, capable of self-control; in the other case, we have a staff immature in hospital procedures, incapable of a large measure of self-control.

The board of directors should exercise control of the staff of the small hospital (1) in an annual election of staff members, and (2) in laying down and enforcing professional qualifications for surgeons and others who attempt the more hazardous hospital practices. In large hospitals the establishment and enforcement of professional standards should be and usually are delegated to the staff.

In a small hospital, staff organization cannot be departmentalized as in a large hospital. In a large hospital with a closed staff there are available for the heads of the various services—medicine, surgery, obstetrics, etc.—physicians who hold membership in the national organizations that qualify them as specialists in their chosen fields. In the small hospital the specialist type, with the exception of surgery and eye, ear, nose, and throat, is usually not available. The medical staff of the small hospital cannot be departmentalized except to a most rudimentary extent. Naturally in the large hospital, with departmentalization of its staff, a valuable mechanism of professional control exists.

In the great majority of hospitals of less than 100 beds a rotating service is not practicable, and in hospitals of 50 beds it cannot be considered. The reasons why a rotating service is not practicable are two: In the first place, there is not enough rotating material, either professional or clinical, to go around. In the second place, unassigned charity in the small hospital constitutes only a small fraction of the charity cases. To illustrate, let us think of a 100-bed hospital with 60 per cent occupancy. Of the 60 patients, 50 per cent, or 30 patients, are charity. Of the 30 charity patients, 4 are medical, not enough to rotate; 4 are obstetrical, not enough to rotate; 2 are eye, ear, nose, and throat, not enough to rotate; 20 are surgical and gynecological, enough to rotate. But of the 20 charity surgical cases there will not be more than two or three that are unassigned. In small hospitals in rural sections most of the charity cases are cared for by the family physician through the interest of the employer or a friend.

The difficult problem with the staff is to have them provide good clinical records. The professional work of a hospital can no more be appraised without clinical records than can be the business condition of an industrial enterprise without financial records. While this is true, we should recognize the difficulties under which the staff of the small hospital keeps its clinical records as compared with the staff of a large hospital. In the large hospital interns or residents write 90 to 95 per cent of the clinical records. In the small hospital there are no interns or residents to write the records. This must be done by the attending physicians. Moreover, most of the records have to be written by the busiest physicians. The big doctor in the big hospital preaches with great emphasis the importance of good clinical records but he does not write them. The little doctor in the little hospital must practice what the other man preaches—the art of keeping good records of his cases.

Now the most effective means for obtaining good clinical records are two: (1) the stimulating influence of the American College of Surgeons and the desire of the small hospital

to obtain the approval of its professional work by that organization; (2) a strong committee of the staff on clinical records that will keep persistently at its work, reporting monthly at the staff meetings on the condition of the records, holding up to staff emulation exceptional examples of good records, and keeping the staff at work on case studies, the basis of such studies being the clinical records of the hospital. *Only a staff that uses its clinical records can have a proper appreciation of their significance.*

While in the last analysis appraisal of the character of the professional work of a hospital must rest upon a careful examination of its clinical records, there are certain important leads or indicators which should suggest the stock-taking process from time to time and the problems that should be reviewed. These indicators or leads are the fatality rates of the hospital. Fatality rates are frequently referred to by professional bodies and by individual physicians and surgeons as a means of measuring professional progress and competency. The staff of a small hospital should have available a tabulation of important current fatality rates to guide them in checking their work against the results of general practice, and as a means of suggesting to themselves special studies of problems with exceptional fatality rates, whether commendably low or dangerously high.

The small hospital cannot command the experienced persons available to the larger hospitals with greater resources and greater needs. The small hospitals, to a large extent, are the training centers from which the large hospitals draw. This in itself is a sufficient argument for enlisting and holding the interest of the larger hospitals in any movement designed to improve the work of the smaller hospitals.

The great need in the improvement of the work of the administrative personnel of the small hospitals is efficient correlating agencies through which the individual hospital is provided with group experience. At present, these correlating agencies exist in the American Hospital Association, the state hospital associations, schools, and in central agencies that require comparative records as a basis for their assistance. An admitted need toward this correlation of experience is in the matter of uniform record systems. Small hospitals in particular should give every encouragement, by both example and precept, to the more extensive use of the uniform accounting system recommended by the American Hospital Association.

In small hospitals the nursing problem is one of our largest and most unsettled problems. It is a subject much better suited to round table conferences than to academic pronouncements. In line with this thought, I shall limit myself here to a single phase of the problem, namely, the use of graduate or undergraduate nurses in small hospitals, or, stated differently, whether the small hospital should maintain a training school. The arguments for maintaining training schools in small hospitals are:

1. They serve the purpose of providing many local girls who have not the resources to obtain a college education with a valuable vocational education.
2. They assure the small community which they serve a supply of nurses that might not be available to rural sections.

3. In providing the hospital with undergraduate nurses, they make easier the problem of discipline.
4. The nursing supply is more stable; the turnover not so great.
5. The hospital can be operated at a lower per capita per day cost with undergraduates than with graduate nurses.

The arguments against training schools in small hospitals are:

1. The surplus of graduate nurses. There are 300,000 graduate nurses in the United States. The annual supply of new graduates is 25,000. One-third of that number, it is estimated, would supply the country's needs.¹
2. The small hospital with 40 or 50 patients, or even less, does not have sufficient clinical material, in either quantity or variety, to provide proper training for graduate nurses.
3. If it costs more to operate a small hospital with graduate than with undergraduate nurses, the improved quality of service and the assurance felt by a physician and administrative personnel when patients are in the hands of graduate nurses justify the extra cost.

In any consideration of the small general hospital the proprietary general hospital is of sufficient importance to call for a brief discussion. Proprietary general hospitals constitute 33 per cent of all general hospitals. They contain 11.2 per cent of general hospital beds. They provide 8 per cent of general hospital care. The average size of the proprietary hospital is thirty-one beds. The proprietary general hospital is a diminishing problem, the number of these hospitals and their total bed capacity decreasing with each hospital census. The proprietary general hospital results from one of two diverse conditions. The earlier and better type developed in communities that had too little interest in hospitalization. The later and poorer type developed usually in communities that undertook to apply hospital standards that disqualified certain elements of the profession and drove them, through a common interest, to provide their own hospital facilities.

In the more rural sections of the country, as in the two Carolinas, the earlier hospitals, like the earlier schools, were private or proprietary hospitals. Before the community developed an understanding and appreciation of hospitals, it was necessary for a physician or surgeon with hospital experience either to build his own hospital or to leave such a community and locate in an urban community where hospital facilities were available to him. Many of the more advanced leaders of the medical profession, realizing the great need of a hospital service, limited though it had to be, chose the first course and built their own hospitals. They were pioneers—leaders in many sections of the United States, in the better types of rural communities—in educating the public to the value of hospitalization. In time, many of these communities, served by private hospitals, have developed an appreciation of hospital service and have come to understand that their hospital problems were larger than one or two physicians could carry, have entered the picture and purchased the private hospital, converting it into a city, county, or voluntary hospital. In this way, the

¹ It should be remembered that this statement was made in 1936.—Editors.

earlier proprietary hospitals, particularly in the rural sections of the United States like the Carolinas, have played the same role in the development of hospitalization that the private schools of fifty to sixty years ago played in the field of education. To these hospitals all of us are profoundly indebted and we should hold these pioneer hospitals in grateful memory.

The other type of private hospitals, not infrequently found today, not in the rural communities but in cities, frequently expresses the dissatisfaction of small groups of physicians with the community management of the larger voluntary hospitals. Many of these hospitals, unlike the earlier rural types of proprietary hospitals, are substandard in the character of their professional work. Not all of them are, however. There are a number of small proprietary hospitals in large centers of population that insist upon and observe higher professional standards than prevail in the larger voluntary hospitals of the community. Here the small dissenting group of physicians that own and operate a high-class private hospital have withdrawn from the voluntary hospital, not because of its rigid qualifications for its professional personnel, but because the group is dissatisfied with the low standards of the voluntary hospital.

The administration of the proprietary hospital is, as its name implies, a private rather than a community or public matter. In most of them there is no board of trustees. The owner or owners operate the hospital. The staff is a closed one, usually very small. Because the staff is a very limited staff and many doctors of the community are excluded and, because they are excluded, are at a great disadvantage in practicing with a group who have hospital privileges, they are forced through common interest to build another private hospital for themselves. So one private hospital frequently begets another. This is a rather common occurrence in the small towns and cities of rural sections.

The support of the proprietary hospital is mainly from two sources: the pay patient and the owner who, out of his professional fees, has to make up any operating deficit or close his hospital. The very fact that the hospital is a private hospital indicates the lack of community interest and the absence of community support. Because of the absence of community support, the proprietary hospital can carry only a minimum of charity, usually from 10 to 15 per cent, as compared with the charity load of voluntary hospitals which will run from 40 to 60 per cent.

8. Who Finances Construction? *by Michael M. Davis**

It is common knowledge that the building of new hospitals and the enlargement or improvement of existing institutions went on rapidly during the decade closing in 1929. Events since then have brought quantitative and qualitative changes in capital investment in hospitals which seem worth knowing.

A brief study of the capital invested during the three years 1927, 1932, and 1937 is described in this report. Attention is given to the total amount of capital investment in hospitals, to the extent to which investment has been private or from government (local, state, or

* Adapted from *Mod. Hosp.* 51:57-58, Nov. 1938.

national) funds, and to the distribution of the investments among the geographic sections of the United States. The material for this study was furnished by *The Modern Hospital* through its weekly information bulletins on current building projects. A report of the Public Works Administration¹ also has been drawn upon. General hospitals and other hospitals for acute conditions, mental and tuberculosis hospitals have been included. Endeavor was made to exclude "related institutions" which are not primarily hospitals. A few of the reports were not sufficiently definite to permit the investment in the institution to be classified as from governmental or nongovernmental sources, but these in no year amounted to enough to affect the general picture or the conclusions stated.

In 1927 more than \$134,000,000 was invested in hospital facilities. Of this amount 28.5 per cent, or \$38,505,605, was invested from local, state, or National Government funds (Table 1). The remaining 71.5 per cent, or \$95,845,000, was invested from private sources in nongovernment hospitals. At the depth of the depression in 1932, the total hospital expenditure dropped to 18.9 per cent of the total investment of 1927. The actual amount was \$23,888,715. Of this, government funds constituted much the larger part, viz. \$18,156,080, while private investment was only \$5,732,635. In other words, 79.5 per cent of the total investment for 1932 was made by government and 20.5 per cent was from private capital. Thus we find, on comparing the figures of 1927 with those of 1932 (Table 1), that an almost complete inversion of the percentages of governmental and of nongovernmental investment had taken place.

TABLE 1. CAPITAL INVESTMENT OF GOVERNMENTAL AND NONGOVERNMENTAL FUNDS
IN HOSPITALS, 1927-37

	INVESTMENT			PERCENTAGE DISTRIBUTION		
	1927	1932	1937	1927	1932	1937
Total	\$134,350,605	\$23,888,715	\$99,061,992	100.0	100.0	100.0
Government	38,505,605	18,156,080	70,387,392	28.5	79.5	71.5
Nongovernment	95,845,000	5,732,635	28,674,600	71.5	20.5	28.5

The figures of 1937 reveal another and different picture. The sum total of investment in hospital facilities during that year was \$99,061,992. This is 73.7 per cent of the total investment for 1927. An appreciable rise in investment over 1932 is thus apparent. Of this total, 71.5 per cent, or \$70,387,392, was invested from government funds, while 28.5 per cent (\$28,674,600) was from private sources. Nearly 40 per cent of the governmental investment, or \$27,540,000, was from Public Works Administration funds, while \$2,225,696 came from Works Progress Administration funds. As is commonly known, a certain amount, but only a small proportion, of the P.W.A. expenditures was in private institutions.

Hospitals built from P.W.A. funds were concentrated largely in a few states, about 80

¹ *P.W.A. Provides Modern Hospitals*, published in 1937.

per cent of the total P.W.A. work being in less than one quarter of the states, and these mostly the states of larger economic resources. The poorer states, many of which present the greater needs for more hospital facilities, were not able or willing to provide the necessary funds to meet P.W.A. requirements.

It is interesting to observe that whereas in 1927 governmental hospital expenditure was 28.5 per cent as against 71.5 per cent of private investment for nongovernment institutions, these percentages are exactly inverted ten years later, the government having assumed the greater share. While in 1937 there is an increase of some \$31,000,000 in expenditure by the government over that of 1927, there is a decrease of some \$67,000,000 in private investments over that for the same period.

In Table 2 the total investments of the three years under consideration are presented according to geographic distribution. The \$134,350,605 investment in 1927 was unevenly distributed in the seven geographic areas. The Middle Atlantic States, for example, showed a total investment of \$46,480,605, whereas the South Atlantic area had an investment of only \$3,384,000. During 1932 and 1937 the same high and low relationship for these areas existed.

Although the Middle Atlantic area maintained the highest ratio of investment it was nevertheless subject to the same inroads that affected the other areas in the depression year. Thus the total investment during 1932 was only \$9,815,908, as compared with \$46,480,605 in 1927. In 1937 the barometer of investment climbed to \$34,459,815, almost four times as great as in 1932 but still below the figure of 1927.

Like the South Atlantic, the South Central area shows an increase of the total investment in 1937 over that of 1927. The South Atlantic area, moreover, shows an appreciable gain over the depression year. The investment figure of \$3,384,000 for this area in 1927 dropped to \$710,000 in 1932. However, the amount for 1937 rose to \$4,428,000, exceeding the investment figure of 1927 by more than \$1,000,000.

In the other five areas the total investments in 1937 were still below the total investments of 1927. It is interesting to note that although the total investment in both the South Central and South Atlantic areas was more than that of 1927, the investment in nongovernmental institutions had decreased. The total increase was solely the result of the increase in government investments.

It is also noteworthy that the government investment in 1937 for all areas was greater than in 1927. With the exception of the New England area, this is equally true of 1932. Further, the amount of government investment in 1937 exceeded that of 1932, with the exception of the Middle Atlantic and South Atlantic areas. For the comparative investment figures of the other areas, reference should be made to Table 2.

The percentage distribution (Table 2) shows that in 1927 the nongovernment investment was greater than the government investment in all sections except the West North Central and Far West. In these areas the investment in government institutions has exceeded that in nongovernment institutions throughout the whole period. In 1932 the investment in government institutions far exceeded that in nongovernment institutions, with

TABLE 2. GEOGRAPHIC DISTRIBUTION OF GOVERNMENTAL AND NONGOVERNMENTAL FUNDS IN HOSPITALS, 1927-37

<i>Investment</i>	1927			1932			1937		
	<i>Total</i>	<i>Government</i>	<i>Non-government</i>	<i>Total</i>	<i>Government</i>	<i>Non-government</i>	<i>Total</i>	<i>Government*</i>	<i>Non-government</i>
New England	\$11,489,000	\$ 5,167,000	\$ 6,322,000	\$1,370,000	\$ 295,000	\$ 975,000	\$ 8,077,719	\$ 4,092,719	\$ 3,985,000
Middle Atlantic	46,480,605	10,315,605	36,165,000	9,815,908	7,189,908	2,626,000	34,459,815	21,487,815	12,972,000
South Atlantic	3,384,000	1,330,000	2,024,000	710,000	630,000	80,000	4,428,000	3,010,702	1,518,000
East North Central	40,893,000	7,778,000	33,115,000	2,791,450	2,166,450	625,000	13,880,590	10,870,590	3,010,000
South Central	9,746,000	2,855,000	6,891,000	2,589,000	1,619,000	970,000	20,628,129	17,442,129	3,266,000
West North Central	10,423,000	5,947,000	4,476,000	1,507,077	1,263,077	244,000	6,246,000	5,395,450	903,000
Far West	11,065,000	6,270,000	4,795,000	4,920,880	3,150,245	770,635	8,331,835	6,786,335	1,545,500
<i>Percentage Distribution</i>									
New England		44.9	55.1		21.5	78.5		50.6	49.4
Middle Atlantic		22.1	77.9		72.2	27.8		64.2	35.8
South Atlantic		39.3	61.7		88.7	11.3		65.0	35.0
East North Central		18.9	81.1		77.6	22.4		78.2	21.8
South Central		29.6	70.4		62.5	37.5		84.2	15.8
West North Central		56.7	43.3		83.6	16.4		83.5	16.5
Far West		56.4	43.6		64.0	36.0		81.3	18.7

* Of the government investment of \$70,387,392, nearly 40 per cent, or \$27,540,000, constituted P.W.A. funds, while \$2,225,696 comprised W.P.A. funds. The statements made concerning the geographic distribution of P.W.A. funds have been estimated from the pamphlet *P.W.A. Provides Modern Hospitals*.

the exception of the New England area. It is interesting to observe that in this year the nongovernment investment in the New England area was greater than in any other area during the same period, and at the same time had increased by 23.4 per cent over that of 1927.

In 1937, without exception, the government investment everywhere exceeded the nongovernment. In the New England area, however, it is interesting to observe that the difference in investment between government and nongovernment funds was only 1.2 per cent.

TABLE 3. PERCENTAGE OF TOTAL INVESTMENT
BY GEOGRAPHIC DIVISIONS

	1927	1932	1937
United States of America	100	100	100
New England	9	6	8
Middle Atlantic	35	41	37
South Atlantic	2	3	4
East North Central	31	12	14
South Central	7	11	22
West North Central	8	6	6
Far West	8	21	9

The percentage of total investment by geographic division (Table 3) shows that the Middle Atlantic States consistently attract a higher proportion of the total than any other area. The South Atlantic area displays the smallest percentage of the total investment of all the areas, although its ratio increased slightly. The North Central States show the greatest fluctuation in proportion of investment; the South Central and the Far West areas also display considerable variation whereas the proportion of total investment going into New England and the Northwest Central States has not altered greatly.

Capital investment in hospitals in this country dropped during the depression to less than one-fifth of the amount shown in 1927, and in 1937 was still substantially less than the pre-depression figure. More striking is the shift of investment from nongovernmental funds to funds derived from national, state, or local governments. In 1927 nongovernmental funds constituted more than 70 per cent of the investment; by 1937 the percentage was reversed.

9. Summary Figures on Income, Expenditures, and Personnel of Hospitals, by *Elliott H. Pennell, Joseph W. Mountin, M.D., and Emily Hankla**

THE degree to which a hospital may render community service is conditioned by the availability of its facilities to the members of the general population. Availability, in turn,

* Adapted from *Hospitals* 12:11-19, April 1938.

depends in a considerable measure on amount of support from sources other than payments by patients, since a large proportion of those needing hospital care are unable to assume the full cost. Consequently, a description of facilities accessible to various groups of the population is not complete without information not only on the number of hospitals and their combined capacity but also on the financial resources of the hospitals. It was to secure data of the latter type particularly that the United States Public Health Service conducted a financial inquiry into all places locally regarded as hospitals which in 1935 offered overnight care to sick or injured persons. This inquiry, known as the 1935 Business Census of Hospitals, has been the topic of two earlier reports: one dealing with the origin, character, and progress of the study, the other describing the financial support of voluntary hospitals. Before considering the data which form a basis for this paper, however, a brief summary pertaining to source material, definition of terms, and method of analysis is presented. The Census of Hospitals was carried on as part of the National Health Inventory, a project of the United States Public Health Service financed by a grant of funds from the Works Progress Administration. The schedule form, prepared in cooperation with the United States Bureau of the Census, was so arranged as to provide for the collection of income, expenditure, and employment statistics which could be used in the 1935 Census of American Business.

The task of defining limits for the field of inquiry was a difficult one. Even the term "hospital" has many connotations. Institutions which are dissimilar in many essentials may deliver service included under the variety of activities known as hospital care. Provision may be made for acute medical and surgical conditions, mental and nervous disorders, and disabilities requiring facilities merely for convalescence and rest. Moreover, the physical plants, staff organizations, and financial resources of the places that accept patients for bed care show great diversities. At one end of the scale are the well-equipped and properly supervised institutions, and at the other extreme emergency stations and nursing homes for which the term "hospital" is more a courtesy than a description.

An initial step in conducting the census was the preparation of a list of all places in the continental United States which in 1935 were organized to provide bed care for sick or injured persons. Through the cooperation of the several agencies which regularly collect information on hospitals, it was possible to extend the enumeration to many establishments which were believed to be providing some bed care but whose names did not appear in any of the several hospital registers. A blank schedule for recording information was mailed to each one listed. Correspondence received from several hundred places to which schedules were sent indicated that they should be excluded from the estimate of total hospital facilities for the United States. Certain of these proved to be mere first aid stations; others submitted evidence to show that the services offered were not those commonly associated with hospitals even though the term be used in its broadest sense; still others reported that they had closed or had ceased to accept patients. After these had been deleted, there remained on the basic list the names of 8,107 hospitals which afforded accommodations expressed by approximately 1,118,000 beds. A total of 5,083 of these hospitals, representing an aggre-

gate of about 944,000 beds, returned schedules which contained at least some items of usable information.

Predominant type of service rendered and economic interest of the sponsoring agency appeared to be important factors influencing the financial picture of hospitals; hence distinctions were made on these bases. In the analyses presented in this report, hospitals have been separated into three medical types: general and special, mental, and tuberculosis. The replies received from infirmary units of schools, prisons, almshouses, and other institutions indicated that many superintendents could not separate financial and personnel figures of such units from the totals for the parent institution. It was therefore decided to omit from this analysis data from 560 institutional hospital units, thus reducing the basic list from 8,107 to 7,547 hospitals.

Governmental hospitals of each medical type have been divided into two groups, those under federal control and those administered by state and local governments which are referred to as "other governmental." Likewise, the voluntary institutions have been described as nonprofit and proprietary, according to the financial plan under which they operated. Under a nonprofit arrangement, the controlling agency derives no personal or corporate gain from the enterprises while under a proprietary plan, such profits as can be accumulated become the possession of the owner or operator. Schedules filed with the census describe 63 per cent of the hospitals, representing 85 per cent of the total bed capacity, for the continental United States. The percentages for each of the classifications used in this paper are presented in Table 1. Very few federal hospitals failed to report while hospitals controlled by state or local governments and by nonprofit associations were more completely represented than the proprietorially owned regardless of medical type.

TABLE 1. ESTIMATED PERCENTAGE OF TOTAL HOSPITALS AND HOSPITAL BEDS INCLUDED IN THE GROUP OF HOSPITALS REPORTING FINANCIAL DATA TO THE 1935 CENSUS OF HOSPITALS

HOSPITAL CONTROL	GENERAL AND SPECIAL HOSPITALS		MENTAL HOSPITALS		TUBERCULOSIS HOSPITALS	
	<i>Hospitals</i>	<i>Hospital beds</i>	<i>Hospitals</i>	<i>Hospital beds</i>	<i>Hospitals</i>	<i>Hospital beds</i>
All hospitals	62	80	68	88	73	82
Federal	95	91	100	100	95	99
Other governmental ...	72	91	83	88	78	84
Nonprofit	71	80	73	74	76	82
Proprietary	43	49	45	44	47	45

In an effort to present the total income, expense, and personnel figures for all general and special, mental, and tuberculosis hospitals, estimates were prepared for each subdivision by multiplying the reported totals by the ratio of beds in all hospitals to beds in those hospitals reporting data. The resulting approximations are regarded as sufficiently accurate to be used in making broad comparisons or indicating general relationships.

Excluding infirmary units of institutions, there were, during the year 1935, 7,547 places

in the continental United States which afforded bed care that might be classified as hospital service. These places, hereinafter designated as hospitals, maintained a total of 1,084,550 beds and spent approximately \$734,500,000. Expenditures for the different medical type and control groups are shown in Table 2. The general and special hospitals, of which there were 6,332 with 477,674 beds, were the predominant medical type in actual numbers and in expenditures. They spent over 513 million dollars, or almost 70 per cent of the total, although they had fewer beds than the mental hospitals. Of all hospitals giving general or special care, the nonprofit group furnished the most beds and spent the largest sum, nearly 314 million dollars. While numerous, the proprietary hospitals were generally small in bed capacity, and their expenditures were correspondingly low, being only 52 million dollars during the year.

Average costs were measured in terms of rated bed capacity and total average daily census. The average expenditure per bed was considerably greater for general and special hospitals under either federal or nonprofit control than for those under proprietary agencies or state and local governments. Based on occupied beds, however, the figures are different. Annual costs per patient were over 20 per cent higher in proprietary hospitals which had an average occupancy of approximately 50 per cent than in the federal hospitals with an average occupancy of about 75 per cent. Another factor tending to obscure genuine variations is that expenses of out-patient departments were included in the reported totals from

TABLE 2. ESTIMATED TOTAL EXPENSE,¹ EXPENSE PER BED, AND PERCENTAGE DEVOTED TO SPECIFIED USES FOR HOSPITALS OF DIFFERENT MEDICAL TYPE AND CONTROL

MEDICAL TYPE AND CONTROL OF HOSPITALS	NUMBER OF HOSPITALS	NUMBER OF HOSPITAL BEDS	ESTIMATED ANNUAL EXPENSES			PERCENTAGE OF EXPENSE DEVOTED TO SPECIFIED USE	
			<i>Total</i> (add 000)	<i>Per bed</i>	<i>Per average patient</i>	<i>Payroll</i>	<i>Other</i>
All hospitals ²	7,547	1,084,550	\$734,659	\$ 677	\$ 834	48.6	51.4
General and special ³	6,332	477,674	513,039	1,074	1,626	48.6	51.4
Federal	289	52,581	56,825	1,081	1,452	67.7	32.3
Other governmental	684	106,387	90,394	850	1,071	55.7	44.3
Nonprofit	2,857	261,804	313,749	1,198	1,991	44.3	55.7
Proprietary	2,502	56,902	52,071	915	1,769	41.4	58.6
Mental	682	535,249	166,193	310	324	49.0	51.0
Federal	27	26,436	19,349	732	776	66.2	33.8
Other governmental	331	487,170	127,405	262	274	46.7	53.3
Nonprofit	59	10,941	7,726	706	869	46.4	53.6
Proprietary	265	10,702	11,713	1,094	1,741	47.2	52.8
Tuberculosis	533	71,627	55,427	774	901	48.0	52.0
Federal	19	4,150	4,868	1,173	1,394	65.2	34.8
Other governmental	306	52,017	39,265	755	834	48.2	51.8
Nonprofit	126	11,662	8,700	746	994	40.3	59.7
Proprietary	82	3,798	2,594	683	1,091	38.4	61.6

¹ Exclusive of depreciation.

² All hospitals except infirmary units of institutions are included in this total even though they may not be registered by the American Medical Association.

³ Exclusive of mental, tuberculosis, and institutional hospitals.

which unit costs were computed. This affected particularly the nonprofit and other governmental institutions. Moreover, in federal hospitals, all medical, surgical, and nursing services are charged to the hospital, whereas in the voluntary institutions, physicians and surgeons on the staff and special nurses are paid directly by the patient. Even in hospitals of local governments, attending physicians are apt to contribute services. These figures, therefore, are only roughly comparable. To determine whether any of the differences are indicative of variations in character of service or in management, a thorough investigation and appraisal of hospital service would be necessary.

The data available indicate that hospitals established for the care of mental and nervous patients numbered 682 in 1935, had 535,249 beds, and made annual expenditures in the neighborhood of 166 million dollars. About half of the mental hospitals, containing over 90 per cent of the beds, were under the control of state and local governments. Moreover, 27 federal hospitals included 5 per cent of the beds. These figures immediately suggest that the mental hospitals of nongovernmental control were small though comparatively numerous. The estimated annual expense per occupied bed for state and local mental hospitals was \$274 as contrasted with \$776 for federal, \$869 for nonprofit, and \$1,741 for proprietary mental hospitals. Thus the annual cost per average patient in the proprietary hospitals was over six times that in the state and local institutions. This is not surprising in view of the well-recognized fact that the proprietary mental hospitals care principally for the well-to-do and consequently provide a more luxurious type of service.

The 533 hospitals which existed primarily for tuberculosis patients had 71,627 beds and expended approximately 55 million dollars during the year. As in the case of the mental hospitals, state and local governments dominate in the control of hospital facilities for the tuberculous. Cost per bed for the tuberculosis hospitals was highest in the 19 federal hospitals. The beds under proprietary auspices seemed to entail slightly less expense than those under nonprofit or other governmental control, but as a larger percentage of them were unoccupied, the annual cost per patient was greater in the proprietary than in any other control group except the federal.

To simplify presentation of expense distribution only two divisions, "payroll" and "other" are used. Included in "other" are supplies, maintenance costs, interest, taxes, and miscellaneous expenditures. Inasmuch as a considerable proportion of the hospital reports failed to provide data on plant assets and depreciation, no estimates for these costs have been included in the total expense listed in the table. A factor operating during the study year, which tended to raise proportionate expenditures for payrolls above their accustomed level, was the granting of money by the Federal Emergency Relief Administration for the express purpose of employing extra nurses from relief rolls.

On the basis of reported costs, federal hospitals spent, in general, a larger proportion of their revenue for payrolls than for other purposes, while the reverse was true of the voluntary institutions. Other governmental hospitals, except those for mental patients, spent comparatively more for payrolls than the nongovernmental hospitals. Although cost per bed differed widely among state and local, nonprofit, and proprietary mental hospitals, the

proportionate amounts of such expenditures which were allocated to "payroll" and to "other" were practically the same for the three groups of hospitals. A further division of expenses showed that proprietary hospitals, with their additional burden of taxes and interest on capital investment, spent relatively more on miscellaneous items, while the non-profit institutions put the largest percentage into supplies and maintenance.

TABLE 3. ESTIMATED TOTAL INCOME AND PERCENTAGE RECEIVED FROM SPECIFIED SOURCES FOR HOSPITALS OF DIFFERENT MEDICAL TYPE AND CONTROL

MEDICAL TYPE AND CONTROL OF HOSPITALS	NUMBER OF HOSPITALS	NUMBER OF HOSPITAL BEDS	ESTIMATED TOTAL INCOME (add 000)	PER CENT OF INCOME FROM SPECIFIED SOURCES		
				<i>Patients</i>	<i>Taxes</i>	<i>Other</i>
All hospitals ¹	7,547	1,084,550	\$727,452	44.0	46.4	9.6
General and special ²	6,332	477,674	505,037	56.2	31.5	12.3
Federal	289	52,581	56,825	7.5	92.4	0.1
Other governmental ..	684	106,387	90,394	16.7	81.1	2.2
Nonprofit	2,857	261,804	303,176	70.8	10.2	19.0
Proprietary	2,502	56,902	54,642	91.4	4.1	4.5
Mental	682	535,249	167,141	16.9	80.9	2.2
Federal	27	26,436	19,349	14.6	85.3	0.1
Other governmental ..	331	487,170	127,405	6.4	91.7	1.9
Nonprofit	59	10,941	7,494	68.4	18.2	13.4
Proprietary	265	10,702	12,893	94.2	4.0	1.8
Tuberculosis	533	71,627	55,274	14.2	78.5	7.3
Federal	19	4,150	4,868	12.2	87.8	...
Other governmental ..	306	52,017	39,265	6.5	92.5	1.0
Nonprofit	126	11,662	8,398	32.3	25.0	42.7
Proprietary	82	3,798	2,743	72.7	26.1	1.2

¹ All hospitals, except infirmary units of institutions, are included in this total even though they may not be registered by the American Medical Association.

² Exclusive of mental, tuberculosis, and institutional hospitals.

The two principal sources of financial support were fees from patients and payments by taxing bodies. Supplementary revenues, combined in this report under "other," were income from endowment funds, bequests not paid into endowment funds, community chest contributions, income in kind, funds created under group benefit plans of various types, and miscellaneous receipts. It is believed that in some instances income from governments and from hospital benefit plans which was paid on an individual basis was reported by hospitals as income from patients. Over one-half of the total amount available to all general and special hospitals was obtained from patients, almost a third from taxes, and about an eighth from other sources. The proprietary establishments, especially, depend for their income chiefly on patients' fees. Nonprofit hospitals, featuring general and special service, though dependent on patients for fully 70 per cent of their income, have greater supplementary resources, consisting of governmental appropriations and of the varied revenues included under "other." Assistance from endowments plays a surprisingly unimportant part. Although institutions organized on a nonprofit basis possess most of the total endowment, their income from this source (included under "other" in Table 3) amounted to

only 6 per cent of their total receipts. Another 13 per cent is accounted for by gifts, dues from group benefit organizations, and a wide variety of miscellaneous contributions. The situation varies, of course. A few hospitals are largely supported by endowments, whereas others are maintained entirely by contributions of some organization, the members of which may or may not be beneficiaries. While philanthropy is not a dominant factor in meeting operating costs, the importance of these funds should not be minimized, for often a relatively small sum may provide increased care or reduced charges for patients. Some church hospitals have an additional advantage in the services contributed by members of religious orders, but no account is being taken of such factors in this report. If the availability of facilities to the lower income groups of the population depends on means of hospital support, these figures have added interest since resources for balancing budgets should be an important indication of the extent to which low rates are available.

Governmental hospitals, as might be expected, obtained most of their funds from taxes. According to the reports, no federal hospital and only a few hospitals under the control of state and local governments had endowment funds. Federal general and special hospitals received about 92 per cent of their funds from the national government, over 7 per cent from patients, and about one-tenth of one per cent from other sources, whereas the state and local hospitals received about 81 per cent from governmental agencies including sometimes assistance from the federal government, 17 per cent from patients, and 2 per cent from other sources.

Mental hospitals as a group obtained 81 per cent of their total income from the tax funds and 17 per cent from patients' fees. An unusually high degree of support from patients characterized the proprietary institutions, but it should be emphasized that they contained only 2 per cent of the beds in mental hospitals.

Governmental appropriations provided more than three-fourths of the total income of all tuberculosis hospitals; patients contributed about 14 per cent and other sources the remaining 7 per cent. Even the proprietary sanatoria derived over one-fourth of their revenue from tax funds and only 73 per cent from patients. Donations are a definite factor in the support of nonprofit hospitals in the tuberculosis field, sources other than patients or taxes supplying about 43 per cent of their total income. The gifts included here, it should be noted, came from organizations such as tuberculosis associations, community chests, or welfare federations more often than directly from individuals. About a third of the income of nonprofit hospitals was obtained from patients and approximately a fourth from tax funds.

Each hospital supplied, in addition to the gross sum spent for payrolls during the year, detailed information on types of employees and personnel costs for a single month, usually October. According to estimates based on these reports, the hospitals in the continental United States paid more than 30 million dollars in salaries during a single month. On the payroll for that month were approximately 429,345 full-time and 15,215 part-time employees, besides 43,738 who received maintenance only.

The estimated number of employees paid on a full-time and on a part-time basis and

those receiving maintenance only for hospitals in different medical and control classes are presented in Table 4. While facilities, as expressed by total beds, were greater in mental hospitals than in those of other medical types, opportunities for employment were provided for a far larger number of persons by general and special hospitals. In tuberculosis hospitals only about one-third as many persons were employed as in mental and less than one-tenth as many as in general and special hospitals. Nearly two-thirds of all employees in general and special hospitals were located in nonprofit hospitals, whereas about three-fourths of the personnel of mental and tuberculosis hospitals were in hospitals controlled by state and local governments.

The ratio of number of employees to number of hospital beds was highest for general and special hospitals, lowest for mental, and in a middle position for tuberculosis hospitals. When the general and special hospitals were separated according to control, the nonprofit group showed the highest ratio of employees to beds, the proprietary the lowest, and the two governmental groups ratios only slightly higher than the proprietary. Of the group of mental hospitals, those operated by state and local governments showed the lowest ratio, while the ratio was highest for those proprietorially owned. Much less variation was shown between control groups for tuberculosis hospitals, the proportion of employees per bed being highest for federal hospitals and lower for other governmental, nonprofit, and proprietary, in the order listed.

Employees who received maintenance only represented a very small proportion of the total employees in mental and tuberculosis hospitals but they were of considerable importance in the general and special hospitals other than those under federal control. Part-time paid employees made up a relatively higher proportion of the total personnel in proprietary hospitals than in those under other types of control, but the percentage was not large.

Financial data presented in Table 5 indicate considerable variation in the payroll costs in different classes of hospitals. When related either to the number of paid employees or to the number of hospital beds, by far the highest average amounts were paid by federal hospitals regardless of medical type. Further analyses of the basic data, which are not reported here, indicate not only that somewhat higher salaries were paid by federal hospitals to employees in the different professional classifications, but also that there were in these hospitals a relatively large number of physicians and surgeons and very few low-paid interns and student nurses. The latter represented a definite factor in the personnel of other hospitals, particularly in those operated by state and local governments and by nonprofit organizations. The average pay per employee was somewhat higher for mental and tuberculosis hospitals than for general and special, while the opposite was true of payroll costs per hospital bed. State and local governmental hospitals of all medical types paid somewhat more per employee than did those operated by voluntary agencies. The average amount paid by nonprofit hospitals was very nearly the same as that paid by proprietary hospitals. The average payroll cost per hospital bed was lowest for proprietary hospitals except in the mental group, where decidedly lower figures were shown for the nonprofit and other governmental hospitals.

TABLE 4. ESTIMATED TOTAL NUMBER OF HOSPITAL EMPLOYEES AND THE DISTRIBUTION OF EMPLOYEES ACCORDING TO PAY STATUS
IN HOSPITALS OF DIFFERENT MEDICAL TYPE AND CONTROL¹

MEDICAL TYPE AND CONTROL OF HOSPITALS	HOSPITAL FACILITIES		TOTAL EMPLOYEES OF ALL TYPES FOR A SINGLE MONTH		DISTRIBUTION OF EMPLOYEES ACCORDING TO PAY STATUS					
					Paid full time		Paid part time		Receiving maintenance only	
	Number of hospitals	Number of hospital beds	Number	Per hos- pital bed	Number	Per cent of total	Number	Per cent of total	Number	Per cent of total
All hospitals	7,547	1,084,550	488,298	.45	429,345	87.9	15,215	3.1	43,738	9.0
General and special ²	6,332	477,674	359,077	.75	302,868	84.3	13,283	3.7	42,926	12.0
Federal	289	52,581	32,279	.61	31,397	97.3	868	2.7	14	(3)
Other governmental	684	106,387	66,723	.63	59,737	89.5	1,840	2.8	5,146	7.7
Nonprofit	2,857	261,804	228,004	.87	184,414	80.9	8,051	3.5	35,603	15.6
Proprietary	2,502	56,902	32,011	.56	27,324	85.3	2,524	7.9	2,163	6.8
Mental	682	535,249	96,925	.18	95,613	98.7	792	.8	520	.5
Federal	27	26,436	9,330	.35	9,227	98.9	102	1.1	1	(3)
Other governmental	331	487,170	76,424	.16	75,779	99.2	332	.4	313	.4
Nonprofit	59	10,941	4,564	.42	4,370	95.8	78	1.7	116	2.5
Proprietary	265	10,702	6,607	.62	6,237	94.4	280	4.2	90	1.4
Tuberculosis	533	71,627	32,296	.45	30,864	95.6	1,140	3.5	292	.9
Federal	19	4,150	2,288	.55	2,190	95.7	94	4.1	4	.2
Other governmental	306	52,017	23,750	.46	22,936	96.6	651	2.7	163	.7
Nonprofit	126	11,662	4,919	.42	4,564	92.8	266	5.4	89	1.8
Proprietary	82	3,798	1,339	.35	1,174	87.7	129	9.6	36	2.7

¹ Employment figures represent data for a single month.

² Excluding mental, tuberculosis, and institutional hospitals.

³ Less than .05.

TABLE 5. ESTIMATED TOTAL NUMBER OF PAID EMPLOYEES, TOTAL PAYROLL COST, PAYROLL COST PER PAID EMPLOYEE, AND PAYROLL COST PER HOSPITAL BED IN HOSPITALS OF DIFFERENT MEDICAL TYPE AND CONTROL¹

MEDICAL TYPE AND CONTROL OF HOSPITALS	HOSPITAL FACILITIES		TOTAL PAID EMPLOYEES FOR SINGLE MONTH ³	PAYROLL COSTS PER SINGLE MONTH		
	<i>Number of hospitals</i>	<i>Number of hospital beds</i>		<i>Total (add 000)</i>	<i>Per paid employee</i>	<i>Per hospital bed</i>
All hospitals	7,547	1,084,550	444,600	\$30,062	\$ 68	\$28
General and special ²	6,332	477,674	316,200	20,779	66	44
Federal	289	52,581	32,300	3,469	107	66
Other governmental ...	684	106,387	61,600	4,350	71	41
Nonprofit	2,857	261,804	192,500	11,343	59	43
Proprietary	2,502	56,902	29,800	1,617	54	28
Mental	682	535,249	96,400	7,072	73	13
Federal	27	26,436	9,300	1,142	123	43
Other governmental ...	331	487,170	76,100	5,206	68	11
Nonprofit	59	10,941	4,500	299	66	27
Proprietary	265	10,702	6,500	425	65	40
Tuberculosis	533	71,627 ³	32,000	2,211	69	31
Federal	19	4,150	2,300	281	122	68
Other governmental ...	306	52,017	23,600	1,562	66	30
Nonprofit	126	11,662	4,800	288	60	25
Proprietary	82	3,798	1,300	80	62	21

¹ Employment figures and payroll costs represent data for a single month.

² Excluding mental, tuberculosis, and institutional hospitals.

³ Including both full- and part-time personnel.

SUMMARY

Most of the funds for operating costs of hospitals are derived either from patients' fees or from governmental appropriations. Contrary to the assumption of many people that non-profit hospitals are largely supported by the contributions of public spirited and generous benefactors, voluntary donations are a minor factor in defraying operating costs except in the small group of nonprofit tuberculosis hospitals. General and special hospitals received more than half of their funds from patients, about a third from tax funds, and about one-eighth from other sources. The responsibility of financing long-term care for tuberculosis and mental patients has been largely taken over by government agencies.

Governmental hospitals, especially those under federal control, spent more for payrolls than for supplies and maintenance, while the opposite was true of the voluntary hospitals.

Nonprofit hospitals, closely followed by those under the control of state and local governments, led all others in providing opportunities for employment. The average payroll cost per paid employee was higher in governmental, particularly in those operated by the federal government, than in nongovernmental hospitals. The payroll cost per hospital bed was highest in federal hospitals and lowest in hospitals operated by state and local governments while voluntary hospitals occupied a middle position.

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CHAPTER III. THE TRUSTEE

I. Trustee Problems in a Small Hospital, *by A. C. Bachmeyer, M.D.**

THE governing bodies of hospitals, as of other institutions, have been variously designated as boards of management, boards of directors, boards of governors, commissioners, as well as boards of trustees. While the functions of the governing board of a hospital remain, in general, the same however it may be designated, it would appear that in the voluntary hospital especially the designation "board of trustees" is most appropriate. This designation signifies that a trust has been imposed and that the members of the board have greater responsibility than that of management alone. In the case of the voluntary hospital, funds have been contributed—by one individual in some instances but usually by many persons, a church organization, many citizens in the community—or the funds may have been accumulated in some other manner. However raised, these funds have been placed in the hands of those who constitute the board for the purpose of erecting, equipping, and operating a hospital for the benefit of the public. Their responsibility is therefore a serious and heavy one.

The board of trustees of the hospital have a dual function to perform. They receive money and property donated or bequeathed for a special purpose. They must conserve this capital as a responsibility to those who gave it, but they must also use it wisely and for the greatest possible benefit of those who it was intended should derive benefit therefrom. The first of these functions (conservation) applies alike to all kinds of trusts. A trustee of any fund must comply with certain legal regulations when he invests money and pays the income to the person or persons designated by the trust. The hospital trustee, however, must not only meet this responsibility but must see to it that income (in some instances, capital as well as income) is expended wisely so that the most effective service is supplied through proper organization and operation of the institution to those for whose benefit the hospital was established.

The trustees are only the instruments of distribution through which the ultimate beneficiaries receive the benefits of the funds entrusted to their care; they are charged with the responsibility of carrying into effect the intention of the donors. Much of our law pertaining to charitable trusts is judge made. From the decisions of our courts may be elicited certain guiding principles that all trustees should know, general rules that will guide them past most of the difficult places. Knowing these, it is possible for them so to shape their course and their relations with their fellow men as to have little to do with courts and lawyers. . . . Trustees and hospital executives should know the principles upon which our laws are based and should know when and how to employ "counsel learned at law." . . . Trustees will be required to account for property placed under their custody. . . . An indi-

* Adapted from a speech presented at the University of Minnesota Institute for Hospital Administration, Jan. 1939.

vidual trustee cannot, therefore, act without authority from his colleagues. . . . While being required to administer the property in their care to the best advantage of the beneficiaries (trustees) are permitted wide discretion in its administration. They are not entitled to compensation for services voluntarily rendered and can derive no pecuniary gain for themselves.

The laws have greatly favored the trustees of funds and properties to be used for charitable purposes but they must be aware of their responsibilities at all times and must always act in accord with the best interests of the beneficiaries of the trust. The law applies with equal force to capital funds and to funds contributed for current operating expenses. So that though your institution has no endowment funds to invest, the fact that it does have property and receives contributions in currency and kind for the conduct of the hospital imposes a trust upon its governing body. A trustee must be careful not to place himself in a position in which his personal interests might conflict with his duties as a trustee.

In view of this general outline of the responsibilities of the board, it is apparent that its members should be broadly representative of both donors and beneficiaries. It should, so far as is possible, be a composite of practically every point of view that enters into our democratic, social, and economic scheme of life. While it is desirable that men and women of the older age group should serve as trustees because of their mature judgment, years of experience, and general attitude toward life, it is well to include some younger members on the board in order to build for the future and provide for continuity of general policies. Frequent changes in the board are not conducive to the best management, therefore prolonged tenure of office should be provided. To enumerate briefly, the board should contain men and women of varied talents and abilities, such as a businessman or financier, an attorney, an educator, a journalist, and representative men and women interested and active in various community organizations and endeavors. Capital, labor, church, legal profession, school, civic clubs should each contribute representatives to the board of a voluntary community hospital. The question is often raised as to whether or not physicians and especially active members of the staff of a hospital should be members of the governing body. There can be no objection if a physician, retired from practice or otherwise not in active practice, serves as trustee of a hospital. Such service, however, by an active member of the staff frequently leads to difficulty. His colleagues may feel that he exerts undue influence in shaping policies, particularly as they apply to professional service in the hospital, or that his trustee position secures for him unusual privileges from the executive and other members of the administrative staff. Then there is the rather delicate question as to whether or not his personal interests may not conflict with his duties as trustee. Also whether it might not be said that he was deriving pecuniary gain from his position as trustee. In view of these questions it is generally accepted that it is best that physicians actively serving as members of the staff do not serve at the same time as members of the board.

It is highly important that careful consideration should be given to the qualifications of every person elected, appointed, or invited to serve as a hospital trustee. Personal friendship or the hope that through election to the board large benefactions may accrue to the hospital

should never be guiding factors in the selection of a trustee. No one should be chosen for this position in a hospital: *first*, who does not possess a genuine and abiding interest in the health and welfare of the people in the community; *second*, who does not have the respect and confidence of his fellow citizens; *third*, who has not demonstrated ability through successful achievement in his major field of endeavor; *fourth*, who is not broadminded, tolerant of the opinions of others, fair and just in dealing with his fellow man; *fifth*, who is not interested in or willing to inform himself concerning the ethics, principles, and practices of the medical, nursing, and allied professions; *sixth*, who is not prepared and willing to give freely of his time and energy.

It is not expected that the trustee, at least not at the time of beginning service, shall be fully informed concerning all the various facts of hospital operation or competent in the details of administration of an institution of such peculiar complexity. It is to be expected, however, that the trustee will apply the same intelligence and acumen to the problems of the hospital that he has applied in the pursuit of his major interests. It is also anticipated that he will be genuinely interested in the varied activities of the institution and that through the display of that interest he will stimulate and inspire other members of the board, the staff, and personnel to greater efforts and more effective service. It may also be expected that he will evidence a desire as well as a willingness to obtain a thorough knowledge and understanding of the fundamental principles of hospital operation to the end that through such understanding and the application of superior intelligence and judgment the highest standards of service and the greatest benefit to the largest number may be achieved.

If there be a clear understanding of the gravity of the responsibilities incumbent upon trusteeship, the caliber of the men and women who will undertake the duties of these positions will be of the highest grade. There should be a realization that one is obligated to act only and always in the best interests of those whom the hospital is intended to serve. There should be no seeking for honors or other recompense for self or for any favored individual or group. Honor in abundance will come to the individual who unselfishly and conscientiously serves his community in this position.

The functions of the board as conservator of funds and as distributor of benefits have been indicated. More specifically, the functions may be enumerated as: *first*, to formulate the policies, rules and regulations under which the hospital's activities will be conducted; *second*, to set up a proper organization, administrative and professional, for the operation of the institution; *third*, to provide for competent administration; *fourth*, to develop and carry out a sound financial program in accordance with the wishes of the donors and the needs and economic abilities of the community; *fifth*, to see to it that high standards of professional service are maintained; *sixth*, to coordinate professional interests with the financial program so that there may be stability and progressive growth in the development of the hospital; *seventh*, to consider the needs of the community, and join with other health and welfare agencies and endeavors in planning to meet the needs that exist or may arise; *eighth*, to establish the best public relations possible, integrate the hospital into the

life of the community, promote favorable public opinion, and in all ways possible develop and enhance the service of the institution.

In order to perform these functions most effectively the board must make proper provisions for its own organization. The usual offices of president or chairman, one or more vice-presidents or vice-chairmen, a secretary, and a treasurer will not suffice if the board is to take its tasks seriously. It is generally recognized that a division of the members into various committees is essential. There are many matters that must come before the board for decision or action. Regular meetings alone do not provide the necessary time for their careful study and consideration. Many problems often quite complex in their content arise which must have earnest investigation before a decision can be reached or action taken. For this reason it is best if a number of regular standing committees are formed. Every member of the board should be assigned to one or more of these committees. It is the purpose of such subdivisions to give careful consideration to and to be informed concerning departmental activities and needs, to study special problems, to plan for special functions, and to submit reports with concise recommendations to the board for action. When functioning properly they conserve the time of the board, assist the administrator, and in many other ways perform valuable and essential services. The most important of such committees consist of the following:

1. *An Executive Committee*, which may consist of the officers of the board plus a few carefully chosen members or of the chairmen of the other standing committees with the officers serving in an ex-officio capacity, or may be otherwise constituted. It is advisable that this committee contain a member of the legal profession for his advice may be needed when emergencies arise. Its chairman may be the president or chairman of the board, or may be elected by the committee. It functions for the board during the interim between regular meetings and should be composed of a small number of trustees who can assemble upon short notice so as to act quickly in case of emergent need. Such a committee being clothed with ad-interim powers must not undertake to act on matters that rightfully should come before the entire board. If this contingency is not rigidly guarded against, there may develop the situation in which this committee takes over the function of the board in such large measure that other trustees lose interest and become complaisant, and hence their value to the institution is lost. There are comparatively few problems arising in the regular course of hospital operation in which the element of time is so important that they cannot wait for a full meeting of the board. However, as a measure of protection and in order that emergencies may be promptly and properly met, there should be an executive committee ready to meet upon call. Such call should emanate from the administrator or issue from the president upon the administrator's initiation. All action taken, and all decisions made by this and all other committees should be approved or otherwise acted upon by the entire board at a regular meeting.

2. *A Finance Committee*. In this instance the committee should consist of the ablest businessmen on the board. It rests with this committee to study and be intimately informed concerning the finances of the hospital. Upon it also rests the preparation of a

sound financial program. The execution of that program is, however, a responsibility of the entire board. The committee should advise the board concerning the investment of endowment or reserve funds, the making of loans, and other financial affairs. It should review the budget after it has been prepared by the administrator and recommend its adoption to the board. It should regularly review the financial reports submitted by the chief executive and in turn inform the board of the status of financial operations. Needless to say, this committee is a most important one; consequently its members should be selected with greatest diligence.

3. *A Committee on Professional or Medical Affairs.* This committee's responsibilities are concerned with the professional work of the medical staff. It should meet regularly with the staff or in liaison with a committee of the staff. Reports, prepared by the administrator or for him by the record librarian, should be reviewed with the staff. This committee is obligated to observe the ethics of the medical profession in all matters that come to its attention. It is responsible to the board for the maintenance of a high quality of professional service and should be informed concerning the respective merits of the members of the medical staff, particularly with reference to the quality of their performance. All matters pertaining to the medical and nursing service, the teaching activities as they relate to undergraduate students, interns, house officers, graduate and post-graduate programs, and all clinical studies or research activities undertaken should come to their attention, as should all affairs relating to administrative-professional relations. It is the duty of this committee to report and make recommendations to the board upon these affairs, including the appointment, advancement, retirement, or dismissal of members of the medical staff.

4. *A Committee on Education.* It is desirable that a competent educator head this committee for its functions have to do with all educational endeavors undertaken in the hospital. If a school for nurses is conducted its activities and program should be supervised by this committee. Its membership for this purpose might be augmented by the addition of others than board members who may be interested in such educational activity. It is important that the members of this committee recognize that they are supervising an activity distinct from the ordinary services of the institution and that the board also be impressed with the fact that nurse training is an educational function not to be confused with nursing service. There is need, however, for an educational committee even though there be no school for nurses. Every hospital should be engaged in educational activities, and practices and programs for the following endeavors should be formulated: the teaching of new employees concerning their duties, and programs for older employees as well should be undertaken; opportunities for the continued education of the staff physicians and house officers, and for the general medical profession should be provided; instruction for the patients in matters pertaining to their health and similarly for the visitors to patients and the general public are worthy endeavors. The preparation and publication of reports, bulletins, pamphlets, and the like fall within the domain of such a committee. If the hospital is to render a comprehensive service to its public this committee will find much to do.

5. *A Committee on Public Relations.* The development of a sound program for pub-

licity and for public relations requires careful study and its execution calls for constant attention. Unless special provision is made, these matters, as is so often the case, may be badly neglected. If a journalist, newspaper editor, or the public relations officer of an industrial establishment is available, it would be desirable that he serve as chairman. This committee should keep informed concerning all activities in the institution and carry on a program that will integrate the hospital with the life of the public it serves, interpret its services, and do all things necessary and ethically proper to build favorable public opinion.

6. *A Committee on Buildings and Grounds.* If there is a building contractor, an engineer, or someone skilled in the building trades on the board, such an individual would make an excellent chairman of this committee. Its functions have primarily to do with general supervision of the maintenance of the hospital buildings, the giving of advice to the administrator, and with him the formulation of recommendations to the board. Questions of renovation, remodeling, extensions, and new buildings fall within the province of such a committee.

7. *A House or Visiting Committee.* This committee is charged with the responsibility of working closely with the administrator, studying administrative affairs with him, and in his company visiting all portions of the institution in order that its members may have an intimate knowledge of the hospital, its furnishings, equipment, housekeeping, and general condition. It, like other committees, should not be empowered to take action, but like them should report to the board and submit concise recommendations when indicated.

Special committees may be appointed as circumstances warrant, but if the regular committees are properly constituted and organized and are actively functioning the need for special committees will seldom arise.

Committees, when properly constituted and when fully cognizant of their functions and relationships, are most helpful to the administrator. They should in all instances work with the chief executive officer of the hospital; serve as his consultants and advisors; give him, and through him his staff officers, encouragement, inspiration, and support. They should know what organization means and not transgress the principles of sound administration.

The prime basic element in good hospital administration is the chief executive officer, superintendent, administrator—call him what you choose. He carries the responsibility for the continued and successful operation of the hospital. It is one of the first duties of the board to secure the highest degree of competence in this position that is possible. It is the administrator's responsibility to perform his everyday duty to the best of his ability. The board should establish the organization and then see to it that all concerned, including the trustees, carry out its policies. The principles of organization are identical no matter what the activity to be conducted. With sound policies, proper organization, competent administration, breadth of vision, tolerance, and a sympathetic understanding of human relationships, there can be assurance that the hospital's service will be effective.

This exposition of a concept of trusteeship will apply to the large or the small hospital. The former, usually located in a large community, has certain advantages over the latter. The small hospital (I refer to the institution of less than 100 bed capacity) is usually lo-

cated in the rural center, or in the city having 15,000 or fewer inhabitants. Good material for membership on the board is often limited. Sometimes there may be a dominant character who may, through autocratic manners, sway the board in all matters. Such a situation is far more likely to develop in the small community than in the large one, particularly if such an individual has contributed largely to the hospital or has been influential in the establishment of the institution. One-man dominance on the board of trustees of any voluntary hospital is never conducive to the most effective organization.

The small hospital is often at a disadvantage, also, because its trustees do not have a broad interest in the functions it should perform. They are apt to be quite provincial, believing that they know best what is proper hospital service, being unwilling to study other hospitals and to learn what is being done elsewhere. Personal relationships are more intimate in the smaller towns—prejudices and jealousies assume greater importance. Board members often accept their positions because of a feeling that it is an honor conferred upon them or that they are conferring an honor upon the hospital by associating themselves and their names with the institution, or they regard the position as an imposed obligation to the community rather than as an opportunity for genuine humanitarian service.

It must also be acknowledged that capable, competent administrators in the number necessary are not available for duty in the small hospital. The conduct of the small hospital requires, in many respects, even higher capability than does that of the large urban institution in which the administrator may have the assistance of well-trained, competent department heads. I have a high regard for the man or woman who is serving as chief executive of the small hospital, and whose institution is serving its community in an able and comprehensive manner. Much of the burden falls upon this one individual and great credit is due, particularly when he or she must labor on in spite of a complaisant, passive board whose members have little or only a passing interest in hospital problems and services.

The correction of deficiencies encountered in instances in which the trustees fail to function properly rests largely with the well-informed, intelligent, competent, untiring administrator. Often such an executive can obtain the understanding and sympathetic aid of alert members of the medical staff and with them quietly plan a course of action designed to instruct the board members and develop in them an interest, a broadening of vision, and an appreciation of the problems incident to the conduct of a worthy program of hospital service.

Trustee problems are manifold and varied. There is no quick and ready solution for them. Those having to do with the relations of the trustee and the administrator are largely problems of human relationship and must be studied and met as such. Those having reference to the trustees' attitude toward the institution are often due to a lack of knowledge of the duties and responsibilities of the position and of the role which the hospital should perform in the life of the community. The wise administrator will study the situation and determine the best means of remedying the deficiency. Problems arising out of the operation of the institution, largely of economic nature in these days of finan-

cial difficulties, and those concerning administrative-professional relationships, are hard nuts to crack. Each one must be carefully analyzed and solved by the concerted action of board and administrator and, in the latter instance, with the cooperation and assistance of the medical staff.

2. The Legal Responsibilities of Hospital Trustees, *by John A. Lapp**

WHAT I have to say is not concerned with the ordinary duties or responsibilities of hospital trustees. It is the legal duties and responsibilities and the implications that flow from them that I wish to discuss. I prefer to deal with some of the larger aspects of responsibility which flow from the special nature of hospital organization and work; those that relate to the trust relationship, with particular reference to the unusual favors that are granted to hospitals conducted for charitable purposes.

The very name which the members of a hospital board bear, namely trustee, indicates the essential position which they hold. A trustee is one in whom a trust is reposed and there is no higher word in ethical language than the word trust. A trust is "a confidence reposed in one person, who is termed trustee, for the benefit of another respecting property which is held by the trustee for the benefit of such other." The responsibility of a trustee who holds something in trust for an individual is a heavy one, but the responsibility of a trustee who holds something in trust for the public benefit, and especially for the benefit of the poor, the lowly, and the helpless, is far beyond (if that is possible) anything contained in a private trust.

Hospital trustees are not trustees merely for the good of any individual or any group. They are trustees of funds and properties for the benefit of the whole community and especially for the benefit of that portion of the population which is most in need. Hospital trustees receive the money and property donated to them and hold it and use it for the community which they serve. The trust which is reposed in them is for the benefit of the public or some large class of the public, as distinguished from private individuals. The trustees of public trust hospital boards are highly favored in the law and such public trusts are upheld under circumstances under which private trusts would fail. They are trustees for charity and derive all of the sanctity that goes with that word.

Hospital boards have as trustees a double function. They must conserve the property that has been placed in their hands as a responsibility to the donor, but they must also use the property for the fullest possible benefit of those whom it was intended to serve. The first of these purposes includes all kinds of trust in like manner. Trustees must conserve and protect the property placed in their hands. The trustees of charitable gifts bear a greater responsibility in the ways in which they make the property serve the beneficiaries for whom it was intended. A trustee of a fund for a private person satisfies reasonable requirements when he invests the money safely and turns over the income to the one for

* Adapted from *Tr. Am. Hosp. A.* 29:427-431, 1927.

whom it is held. A hospital trustee must not only do that but must see that the best possible results are obtained in the expenditure of the money in the organization and administration of medical and surgical care of the beneficiaries of their trust in hospitals.

There is, therefore, not only the duty of conservation but the duty of action. A board of trustees that fails to take advantage of modern medical, social, and hospital progress and maintains an institution of inferior quality fails in the most essential portion of its trust and in effect destroys the whole trust. One of the first responsibilities that flow from trusteeship of hospitals is that the hospitals shall be kept abreast of progress. A second responsibility flows from the favored treatment which benevolent hospitals receive under the laws of the country. Benevolent hospitals are largely exempt from liability from injury done to patients who are their beneficiaries. It is an established doctrine in most of the courts that the moneys that were intended to aid the sick should not be diverted to pay for damages that may have been caused. This seems logical and fair, but it places an extraordinary responsibility upon the hospitals to see that damage is not done. In private business one of the great promoters of safety is the danger which individuals and corporations run of liability for damages. If that spur to careful management is wisely removed from hospitals then a greater responsibility to see that injury does not occur flows from it. The ground for exemption was stated in one hospital case as follows:

A hospital opens its doors without discrimination to all who seek its aid. It gathers in its ward a company of skilled physicians and trained nurses and places their services at the call of the afflicted, without scrutiny of the character or the worth of those who appeal to it, looking at nothing and caring for nothing beyond the fact of their affliction. In this beneficent work it does not subject itself to liability for damages though the ministers of healing whom it has selected have proved unfaithful to their trust.

This might be carried to extremes and the courts are gradually placing liability upon hospitals unless the staff is selected with due care. The reason for this was well stated in another case, as follows:

The beneficiaries of charitable institutions are the poor who have very little opportunity for selection and it is the purpose of the founders to give to them skillful and humane treatment. If they are permitted to employ those who are incompetent and unskilled, funds bestowed for benevolence are diverted from their true purpose and under the form of a charity they become a menace to those for whose benefit they are established. It is, therefore, better for those committed to their care and for the institutions, and necessary to effectuate the purpose of their creation, to require the exercise of ordinary care in selecting employees and in supervising them.

The latest case of great significance follows the reasoning that hospitals ought not to be exempt from liability when employees have not been selected with due care. The Supreme Court of Ohio in *Taylor v. Flower Hospital* said:

We are convinced that sound reasons sustain the great weight of authority to the effect that a public charity should not be held liable for the neglect of the servant in whose selection the hospital and its managers have exercised due care. On the other hand such institution is liable when it fails to exercise such care.

The court goes on further to point out the duty of the hospital and its limitation in respect to supervision, thus:

It cannot watch or control the countless acts and movements of its servants, but it can and should see that only careful and competent servants minister to stricken patients who are within its walls. Moreover, while it may well be said that donors of funds for the praiseworthy objects of charitable hospitals do not contemplate the diversion of fund for the payment of damages for the numerous acts of servants referred to, yet they necessarily realize and appreciate that they give their donations to those who have the management and control of the institution and that every principle of justice requires that they use care in the development and maintenance of the property and in the selection of servants who have the oversight of patients.

It might pertinently be asked here what constitutes due care in the selection of employees and how hospital trustees can fulfill their obligations in this respect. It is not to be presumed that trustees can give any portion of their time to supervision or to a close study of the qualifications of all the numerous employees of the hospital which they control. The responsibility might seem to be too great, therefore, for laymen to assume with respect to hospital management. The trust imposed may seem too exacting. This, of course, should not be the case, for all that the courts require is that reasonable care be provided and that on the part of trustees and managers reasonable care be exercised in the selection of the employees. If trustees exercise arbitrary power and place in authority men of proven incompetence, then not only should the hospital be liable but I personally believe trustees themselves should be personally liable. The courts have not passed upon this question in any considerable number of cases. In one it was held that where trustees who were laymen had appointed a medical staff on the recommendation of a board of twenty-five physicians and surgeons, they exercised due care and that the trustees were not responsible to patients for the acts of such appointees. The question itself must become more and more insistent with the growth of specialization in all branches of medicine. It might be assumed that anyone who is authorized to practice medicine by the state is thereby fit to be admitted to the staff of a hospital. It is, of course, presumptive evidence that a physician is qualified if he has been licensed to practice by the state, but everybody knows that it would be most unwise to permit any physician to practice on a staff, that there are many physicians holding licenses who are incompetent morally or professionally to be permitted to practice in a responsible hospital. The specialization of hospital care must create more and more difficulty in this line. Special branches of surgery, special development of x-ray and radium, the development of the various therapies, all bring increasing responsibilities to the trus-

tees for the selection of competent superintendents and, through the superintendents, of competent assistants and employees.

In addition to what has been said in respect to exemption from liability and the increasing duty imposed upon trustees to fulfill their trust to the sick and the poor, we have also to consider the responsibility which comes from the fact that hospitals for benevolent purposes are largely exempt from taxation. The theory of such exemption is that the hospitals are doing a public service—a service that the public would otherwise have to perform in hospitals of its own. Exemption from taxation amounts to a contribution on the part of the public to the support of benevolent hospitals. The amount which the hospital would otherwise be taxed is the equivalent of public payment for the service of the hospital. Here again all that has been said with respect to the duties of trustees applies. In addition to the ordinary responsibilities of the trust there is here the further public trust that the institution is benevolent in character and is serving the public and the poor and is doing it with a reasonable degree of efficiency and with reasonable standards of medical care. Perhaps the public would not provide better hospitals but that does not change the fact that a trust has been reposed in men who are already given a public trust to use the funds and the properties in their possession for the high ends which hospitals serve.

In order that hospitals may fulfill the obligations of the trust which is reposed in them, it is essential that a reasonable degree of freedom be given to the trustees. The first obligation of trustees is to their trust. If laws interfere unfairly with the carrying out of a trust, then trustees must choose between fulfilling their obligations to the trust and violating the law which interferes. This does not mean that trustees are supreme. It does mean that legislatures must be reasonable. The passage of laws for legitimate ends is to be commended. We need social action for the promotion of the common good and we get social action only through the legislative bodies. When that action transcends the reasonable limits and interferes with the proper management of trusts, it becomes a menace not merely to the trustees but to the public for whom the trust is created.

The passage of a law which would compel hospital trustees to violate their trust cannot be upheld on any principles of equity. A hospital organized for the purpose of caring for sick and disabled persons has the duty of seeing that the best of medical, surgical, and nursing care available in the community shall be given to the patients. What shall we say, then, of a law which would compel trustees to permit any physician licensed to practice medicine in the state to serve upon the staff of the hospital? What shall we think of such a law as that of Montana which would require trustees to permit various cults to practice in the hospital? What becomes of the responsibility of trustees for the conduct of hospitals in such cases? If the trustees cannot control the kind of medical service that is given in the hospital, what else is worth controlling?

That the end is accomplished by indirect methods, namely, by removing the right of exemption from taxation or exemption from liability, does not alter the case. Laws could not force a private corporation to permit anybody to practice on the staff. No such laws

have been passed and clearly would be unconstitutional, inasmuch as the state has no right to interfere directly in the conduct of a private business, and especially when that business is in the nature of a trust. The indirect method is the one used and hospital trustees should face the issue squarely. Probably the state can remove the exemption from taxation and liability in such cases, but the trustees should frankly refuse to be bought away from their plain trust duty by the paltry amount of the tax from which they are exempted or the possibilities of liability for injuries to patients. It would be better to pay the tax and insure against the liability than to permit that the hospital be governed by anyone who is not definitely under the law responsible for it.

All this does not mean that trustees should be high-handed in their dealings with the public or in their attitude toward the laws. All institutions are subject to regulation for the public good and an institution such as a hospital, which serves so vital a public interest, is especially subject to regulation and supervision. Hospital managers should recognize the reasonableness of legislation when it is reasonable. In fact, there are very few provisions on the statute books of any state today that may be said to be unreasonable. Hospitals have been given a deference that any privately managed agency might envy. Cooperation with the lawmakers to the end that reasonable requirements may be promoted and unreasonable ones defeated is the end for which hospital managers and organizations should work. It should never be forgotten that hospitals perform a public function. While privately managed they are public in their ends. To fulfill that dual relationship is the unique responsibility and the high duty of hospital trustees.

3. Calling All Trustees, *by Raymond P. Sloan**

SURELY it is a hopeful sign when hospital trustees and administrators can get together and discuss frankly and fearlessly their great mutual problem, the voluntary hospital. And it is a problem. Along with other changes that have taken place during recent years, we are seeing our voluntary hospitals threatened. Shall we stand by and watch this take place under our very eyes or, shaking ourselves free from the lethargy that has enveloped us, shall we finally face reality and save this voluntary hospital system of ours?

But first we should ascertain where we, as individuals, stand on certain matters. To fight successfully, we must have the conviction that our cause is right. Do we believe that the voluntary hospital system has a place in modern life? We must be convinced of its value in representing a private approach to social problems, assuring freedom from political control, of its flexibility in making rapid adjustments to social changes, and of its contribution to scientific research.

Hospital trusteeship is not what it used to be, a mere label denoting social distinction, an honor bestowed upon the privileged few. Those seeking such favors might better look elsewhere. Hospitals, like commercial enterprise, have suffered the throes of depression and even today are racked and torn with uncertainty over what the future holds for them.

* Adapted from *Mod. Hosp.* 51:47-48, July 1938.

There is place on their boards only for sincere, serious-minded men and women possessed with proper social attitudes who are willing to make the necessary sacrifices in time, interest, and money with which to fulfill intelligently the obligations they assume.

The uncertainties of present economic conditions keep the average individual constantly concerned over his own affairs. Has he time to give to his hospital duties? Before answering that question, he should remember that his business involves only himself as an individual, his family, and a comparatively small group. Hospital business, however, involves not only himself and his family, but every man, woman, and child in the community. Can he afford to give it merely "what's left" of his busy life? What are the functions of a trustee? Perhaps it would be well to define them:

1. To consider the economic waste of illness and to interpret hospitalization in its relation to the community and to other public health agencies within that community.
2. To establish the general policies of the institution and to accept full responsibility for their enactment, including adequate financing with which to maintain high professional standards.
3. To contribute conscientiously, not in money alone but in time, interest, and intelligent understanding; and always to remember that guidance must never be confused with interference.

Suppose we were to take these three principles and apply them as a yardstick to men and women on our hospital boards today. How many would be eliminated? It is something to think about. Greater selectivity in appointing trustees would be a panacea for many hospital ills. Yet that is not always as simple as it may seem. The answer seems to lie, first, in selecting wisely and, second, in educating intelligently, for without question trustees need education. They know too little about hospital organization. They do not always recognize where their responsibilities end and those of the administrator begin. This does not mean that the hospital administrator has no need for help and guidance. He does, but if the trustee has not time enough to give to the broader phases of public health work and the part that the hospital must play in it, surely he cannot intrude, or it is undesirable that he intrude, into details that can be interpreted as administration only. His is essentially the obligation of providing the necessary funds with which to maintain high professional standards and of adopting policies that will achieve those standards.

Much progress has been made, but organization practices are still encountered that have been handed down from the days when an unenlightened board assigned hospital administration to almost anyone who had not been accused of some glaring crime and was in need of a job. Fortunately, it is now recognized as a profession in its own right, and more and more is heard about schools and colleges for hospital administrators. It is unfortunate that the same cannot be said regarding the education of hospital trustees.

Shocking as it may seem, there are still hospitals in which the trustees meet regularly behind closed doors, that is, so far as the superintendent is concerned. Another heritage is the inspection committee. What trustee is qualified to inspect a hospital? And what a reflec-

tion upon his own judgment in appointing an administrator who needs to be checked by a lay group so ignorant of professional details! Certainly there should be groups going through the hospital regularly, but for their own education. They should also go through other hospitals to acquire a basis for comparison and to broaden their knowledge. The appellation "Visiting Committee" would seem to be far more appropriate.

Probably one fault of our trustee setup is that we are overloaded with dead wood; there are present on our boards men and women who never attend meetings and who contribute little if anything in money or personal interest. Better by far a smaller group of vitally interested public-spirited people who will get out and fight than a large number of apathetic incumbents!

Twenty or twenty-five trustees should be ample. Let us presuppose a board of, say, twenty. As an ideal setup it is comprised of an outstanding lawyer, an engineer, a banker, an advertising man or someone with a knowledge of public relations work—he may even be the owner or editor of the local paper—and businessmen of standing in the community. Women as carefully selected for their interest in public health and social welfare have an equally great contribution to make. Many successful hospitals governed exclusively by women attest to this fact. In recognition of a changing social order, why not include someone representing labor? Make sure that we are building for the future by including some younger men. Each one should have something to contribute and should realize his obligation to do so. Of paramount importance is it to fit each trustee to his own particular niche.

Certain individuals should be appointed to head special committees, but again let us limit the number of committees. Without any intention of becoming too involved in details at this time, we might suggest a medical committee, nursing committee, social service committee, out-patient committee, finance committee, personnel committee, and, last but not least, a public relations committee. The chairmen of these committees will form the executive committee, i.e., the policy-making group, with the president, vice-president, secretary, and treasurer. This is merely a suggestive outline from which deviations can be made to meet local needs.

The public relations committee is mentioned last for emphasis. Here is another indication of the changing order of the times. At last hospitals are realizing the need for telling their story and winning the support and interest of the public. It is, in fact, their only hope of survival. Some such committee should be a requisite. Preferably, its head should be one familiar with the subject. Should there be on the board an advertising man, journalist, or publisher, the problem is simplified. Appoint to work with him two or three of the younger businessmen, for this public relations work is also an excellent medium through which to educate hospital trustees. Much of the service the layman can and should be rendering the hospital falls under the heading of public relations. Speaking generally, it might be described as interpreting the hospital to the public and winning for it the good will and financial support of the community it serves. Specifically, it means all sorts of projects that will make of every patient and visitor a friend and booster.

The public relations committee, for example, working in conjunction with the adminis-

trator or someone on his staff, might well consider the potentialities of a house organ, a little monthly or quarterly news sheet to be distributed to the hospital personnel, trustees, donors, and a selected list of names. And don't forget to include the names of high school principals, for there are good reasons for a closer relationship between hospitals and schools. If there is a training school, it is essential; and surely there can be no more effective way by which to educate the public about the hospitals than to begin with the children. Also, why not include in each bulletin something of interest to the patient upstairs and see that a copy is placed on his bed table? What better opportunity can there be for telling the hospital story than to the patient who has time on his hands!

Just a word, too, about reports. It is not hard to place hands on hospital reports that have not been changed in general format for fifty years. And what a dramatic story the annual report can tell! Get the public relations committee busy on it. If necessary, retain the services of someone qualified to do the job right.

But should the trustee become involved even in such details as these? A fair question, to which the answer is yes, provided that such details do not intrude into professional procedure. How else is he to acquire hospital background?

In such projects, as in all hospital matters, there must be teamwork; the trustees and the administrator must work together always to ensure the efficient conduct of this business of ours. If the trustee is to become more intelligent on hospital problems, to whom must he look for help and guidance but the superintendent? Despite an understandable reluctance to assume the role of guide to those in whose service he is employed, can the hospital administrator of today refuse to accept this responsibility!

There is encouragement in reports announcing the formation of trustee councils and meetings devoted to trustee problems. At last it appears that the trustee is awakening to the seriousness of the situation and is groping about to find an answer. Too often these occasions are devoted merely to generalities with no attempt to study and to get to the bottom of such basic problems as adverse legislation, unionization of labor, the trend toward a shorter working day, and sources of adequate financial support.

Let us form trustee councils, by all means. Let every man, woman, and child become as intelligent as possible on hospital matters. This is no time for a defeatist attitude. It is the time to fight, for each and every one to quit feeding his own selfish egotism and to think in broader terms of the community at large, its public health needs and how they can best be met through our voluntary hospitals.

4. What I Expect from My Board, *by E. M. Bluestone, M.D.**

MY right to expect anything from my board of trustees derives from the fact that I was engaged by it in the first place. I am not sure that the medical men of the hospital were consulted, but, if they were, they apparently gave their approval. Those who were to be my chief concern—the patients—were not consulted in my selection. While I must admit that

* Adapted from *Mod. Hosp.* 53:75-78, Aug. 1939.

this gives me food for thought, I must say at once that I feel as deep a sense of responsibility to them as if they were my masters. The first thing that I expect from our board of trustees, therefore, is an appreciation of my interest in the comfort of the patients who have been entrusted to its care.

The board of trustees and I have pledged our faith to each other. It is by the grace of that supreme executive, legislative, and judicial body that I hold the mandate of my office. Since the trustees are thus omnipotent, I expect that sufficient power will be conferred upon me to parallel the authority that goes with my position. They are my superior officers and I am directly responsible to them. Having undertaken the task of carrying out their wishes in the hospital, it goes without saying that my appointment indicated from the start that, in a general way, I was in harmony with their policies. I must confess, however, that I accepted the appointment with a mental reservation, even though I was fundamentally in agreement with my future employers. I expected, though this was not stipulated in the bond, that they would submit to an educational process that would naturally result from the engagement of a hospital administrator who, in their opinion, had some expertness in his specialty. I must add, at this point, that I have no contract with my board. "The letter of the law killeth. . . ."

The flow of authority in the hospital, as I see it, is as simple as these words indicate, though this is not yet fully understood by those who must submit to authority from time to time. I expect the governing authorities to be aware of this psychological situation and to do whatever they can to improve it. "Passing the buck" to the board is a perfectly legitimate phenomenon when indicated by special occurrences.

I have said that the board is the final authority in the hospital. The commanding position that it occupies arises from an interesting social development. The strong members of the community, in response to an instinctive feeling of mutual aid, banded together for the protection of its weak members. Hospitals were eventually organized and the representative strong members of the community, responsible men possessing qualities of leadership and knowing the value of discipline in organizing for the care of the sick, developed what we now call a board of trustees.

Membership on the governing board of a hospital is a sacred trust and every good trustee must surely find his reward some day. It is a rare opportunity to be a hospital trustee and one that I could wish for my best friends. If I had a son who could achieve hospital trusteeship I should die happy in the thought that he had lived a useful and noble life of service to his fellow men and proved himself worthy. My superior officers are, therefore, trustees of a vital social activity. I am aware of their privileged position and expect them never to forget it.

I expect my board to exercise the greatest care in selecting its executive officers and also in selecting new trustees, with all of whom I am expected to work in such a humanitarian enterprise. I expect my board to know whence it comes and whither it goeth. I happen to be going the same way and, therefore, feel a sense of kinship with them. I have often told my

superior officers that I consider myself a trustee of the hospital as well as its administrator. If my board appreciates its aristocratic position in the world of charity, I can be content with the feeling that my work as administrator will bear fruit.

I expect a human relationship with my board of trustees. We must understand each other and approve each other's motives, methods, and purpose in life, either immediately or after frank discussion. We must speak the same language, think the same thoughts, and plan the same deeds, all for the sake of our patients, no matter how we may differ politically or in any other way not directly concerned with the care of the patient. I must have the board's technical assistance from time to time and expect it to be granted to me freely.

I should, indeed, feel that my time had come if a major difference of opinion, which could not be reconciled, had arisen through a fault on either side that was not subject to correction; or if many small differences of opinion, making for an unharmonious relationship and reflecting unfavorably on the care of the patients, showed no signs of change after a time.

Philanthropy, in the financial sense of the word, depends upon the capitalist system for its survival and so does the voluntary hospital. Whether philanthropy is more genuine or more humanitarian under a different economic system and whether the voluntary hospital has merits that cannot be achieved under any other system are questions that do not enter into the administrator-trustee relationship. There is doubtless much to be said on both sides, but technical hospital administration, in any case, requires a governing body that (a) knows how to plan wisely, (b) gives the administrator's initiative full play, (c) sees to it that the budget is balanced, (d) is willing and able to attend board and committee meetings and render highly specialized assistance from time to time, (e) upholds the discipline of the hospital, and (f) is in all other ways aware of its responsibilities. If any political differences of opinion exist they must not be permitted to affect a relationship which, in the final analysis, depends on the sick poor for its existence. This subject should be studiously avoided and neither side should involve the hospital in such disputes.

I can hardly believe that any material consideration would influence our mutual obligations to each other and to our patients. Only if I felt that the essentially humanitarian quality of hospital service had been deliberately injured by those who employed me would I part company with them. I expect my board to know that I, too, have a strong sense of responsibility. Apart from such a forbidding contingency, if I were to find that I could be more useful in another field of activity I would make my departure as little of a hardship on our patients as possible, just as I would expect that, if the situation were reversed, my board of trustees would deal as fairly with me (and then proceed to look for a better administrator).

I keep my board closely informed and present every problem as fairly and as completely as I can and expect it to ask among the first questions, "What is best for the patient?" before letting me have its decision. I expect my board to be rigidly impartial at all times. There must be no trace of favoritism in any phase of hospital activity in which the

sick are concerned. Complete and absolute freedom from bias must prevail in every activity of the hospital, whether patient, relative, or employee is involved. I expect my board to see to this by setting the example.

It seems to me that the executive, legislative, and judicial functions of my board are the easiest for men of their caliber to perform. It is the balancing of the budget that makes their task so difficult. I expect my board to appreciate its responsibilities in such a situation to the extent that it will remove from my mind, as much as possible, the burden of worry over the financial deficiencies of hospital life. This kind of restraint has a deadening effect and I expect my board to realize it. The hospital being a communal institution, combining a social with a scientific purpose, I expect a progressive attitude to prevail among the board members at all times, in prosperity and in adversity.

I realize that executive duties have been delegated to me while the board retains the power to decide appeals from my decisions. On this point an understanding should exist. I expect a reasonable amount of support in carrying out my duties as they have been assigned to me. Policies must be set, rules and regulations must be promulgated. If the administrator is the expert in administrative medicine that he was taken to be in the hour of his appointment, his advice should be sought when changes of any kind are indicated.

Since the duty of discipline is his and he must see that the policies of the hospital and its rules and regulations are observed, he has a right to expect support. As representative of the board of trustees in the hospital, he must see that the peace is kept and that the patient is getting the most out of his stay, failing which he must recommend modifications to the board as the occasion requires. No board of trustees can proceed independently in vital matters affecting the hospital and expect the administrator to be happy in his work if he is not taken into its confidence.

I know that the board cannot substitute for me in my efforts to command the respect of patients and employees, since this is inherent in my personality, character, and training, but my board can do much to convince everyone concerned that I am the executive and that my influence in the hospital is a wholesome one. If the trustees and their opinions are worthy, no better combination for progress can be imagined. The trustee serves his patients best and most unselfishly who knows how to cooperate with the administrator (while guiding him with the advice that comes from maturity), who displays a deep concern for the underprivileged in the hospital, and who brings a wealth of experience in other fields of endeavor that has special value in hospital administration.

I expect my board of trustees to be a court of appeals that recognizes that I am only human and, therefore, fallible; a legislative body that knows where to go for sound hospital advice; a firm executive force where the interests of the patients are concerned; and a financial corporation in which each member is able and willing to play a leading role.

The character of the trustee is a measure of the quality of the hospital. The administrator has a right to complain when character, understanding, interest, cooperation, generosity, and sympathy are lacking. The tendency to "let the administrator do it," and to stand by inactive, must be discouraged. I expect the trustee to be open minded, cultured,

and humane. As a rule, he is the pick of the upper strata of the community. He must be big enough to step down occasionally and to learn the techniques of hospital service from the administrator and from such other instructors in the hospital field as the administrator may from time to time prescribe for him. The good trustee receives while contributing and it is in this respect that I find one of my greatest opportunities with the splendid men who happen to sit on my board.

On the negative side there is something more to expect. I want my trustees to know what not to do. Many of my colleagues dread the interference of trustees in the routine administration of the hospital. This interference is generally conceded to be the greatest single threat to the authority of the administrator. A discussion at this point with a newly elected trustee is the first step in his education for hospital service, unless he arrives with a full understanding of the situation. The negative type of trustee requires neutralization through diplomatic channels.

The upper millstone, consisting of the governing board, and the lower millstone, consisting of the working staff, must grind out the finest product that can contribute to the health of the community. The administrator must never allow himself, or be permitted, to be caught between these two forces. It is for him to see that the interaction between these two parts is as perfect as human beings can make it, but he must have safeguards to protect him from injury in handling such delicate yet cumbersome machinery.

Collaborating with such a board as I have described, any administrator may carry on with a feeling of safety. He need not be uneasy about the conditions of his employment, including the tenure of his office, which is the greatest single worry to any qualified man whose lot may be cast with a board that has not been educated to its essential task. I give the best that is in me and expect appreciation for my efforts in the form of pleasant and co-operative relationships at all times.

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CHAPTER IV. HOSPITAL ORGANIZATION AND MANAGEMENT

I. The Hospital in Modern Society, *by William H. Spencer**

SPEAKING generally, the function of the hospital in modern society is to assist in the task of conserving our greatest economic asset, the health of the nation. Perhaps also it has another function—that of making an effort to prolong the span of human existence. Such an effort has, of course, serious social and economic implications. In view of the socially disturbed conditions of the world now, the effort to prolong human existence may not be socially wise.

Quite aside from the question of the social wisdom or unwisdom of prolonging the span of human existence, no one can deny the social desirability of taking steps to check premature deaths and to improve the health of the nation in terms of the normal cycle of human existence. Looked at from a humanitarian point of view, what a tender and merciful mission it is to relieve the suffering of the sick and the mental anguish of their friends and loved ones. Looked at from a purely material point of view, the amount of savings in economic society which could be effected by a more intelligent, comprehensive, and thorough application of what medical science has revealed is incalculable. Industrial accidents, occupational and other diseases place a tax upon industry more oppressive than the tax which the national and state governments levy upon it. And while medical science is not responsible for this situation, it certainly must assume a large responsibility for assisting industry in checking this deplorable wastage of social energy.

As I see the situation, medical science has made amazing progress in its study of human disease and its treatment. But no one, least of all the medical scientist, would contend that medical science has completed its task in this respect. Medical science must always be establishing new frontiers. Perhaps the task is endless. Certainly as medical science brings one disease under control, our complicated and wholly irrational way of living creates new human ailments, in many instances more subtle and baffling than the older ones. Where medical science has failed—or should I say where society has failed—is in the performance of the task of what the businessman describes as the marketing of his product. Medical science, to press the analogy further, has an excellent product which it furnishes to those who know its value and are able to buy it. In this connection let me paraphrase a statement of a former colleague of mine. He was fond of saying that the rich and fortunate have too few insecurities of the right kind and that the masses have too many insecurities of the wrong kind. In so far as this is true in the field of human disease, we have a deep social responsibility to correct the situation.

Representatives of the present national government state that approximately 65 per

* Adapted from *Hospitals* 12:11-17, June 1938.

cent of the total population of the nation are without adequate housing. The validity of such an opinion, of course, depends upon what kind of standard one adopts for measurement. In so far, however, as this is a valid judgment, the situation is not due to the fact that in the present state of knowledge we do not know how to build adequate houses. It is due to the fact that the masses of the people either are not educated up to the standard of adequate housing or that they cannot afford it at prevailing costs. Thinking vaguely in terms of a similar standard, one may with safety state that a similar percentage of the total population are without adequate medical care, not because medical science does not have an excellent commodity to offer, but in part because the masses are not educated up to the standard and in part because they cannot meet the current costs of adequate medical care.

In the task of conserving the nation's health, the hospital plays an important if not an indispensable role. If the task is to be performed in the future with that degree of effectiveness which it merits, the hospital must play a more important role than it has played in the past. This, it seems to me, is apparent when one considers the nature of the hospital in modern society. Looked at from one point of view, the hospital is a social institution which coordinates the services of a group of highly specialized medical scientists and experts. Just as in business, so in medical care, specialization can effectively and economically be engaged in only as institutions develop through which the services of specialists can be coordinated. A commercial bank is a business institution which, among other things, coordinates the services of financial experts. An insurance company similarly coordinates the services of risk experts. Service institutions, such as banks and insurance companies, tend to increase in size and importance as the individual business units served by them become larger and more complicated. In a similar manner it may safely be predicted that hospitals will inevitably increase both in number and in size as the volume of demand for medical care increases. To return to the analogy which I used earlier, if we are eventually to secure mass distribution and mass consumption of medical care, it will have to come about for the most part through an increase in hospital facilities, not only in cities but in rural communities as well.

Looked at from another point of view, the hospital in modern society is something more than a hospital; it is, in addition, a business organization. You no doubt have frequently heard the university defined as a community of scholars. This is, of course, a very pretty idea. However desirable it may be as an ideal, and whatever may have been the nature of a university in its original sense, we know now that a university is something more than a community of scholars; in modern society it has become, in addition, a business organization. This is a fact to which any college or university president will testify. The University of Chicago is, as a community of scholars, composed of something more than a thousand instructional and research members. In addition to this, it is an employer of nearly three thousand non-instructional and non-research employees. It is a purchaser of a large volume of general and specialized commodities. It annually invests and re-invests large sums of endowment funds.

The hospital, too, may be conceived of as a community of medical experts. But in mod-

ern society, the hospital, like the university, tends more and more to assume the attributes of a business institution. It, too, has problems of organization, personnel problems, cost problems, buying problems, financial problems, and problems of public relations.

Looked at from still another point of view, the hospital in modern society is or should be a community institution. As I have just pointed out, the hospital is an institution which coordinates the services of skilled specialists. This, of course, implies cooperation among the specialists. But the hospital is a community or a cooperative institution in an even broader and more fundamental sense. It serves the needs of its community, as a business serves its market. In this sense, the community has an interest in the hospital; indeed, it has the right to demand that it be well organized, well administered, and well staffed. The statement that the hospital is a community institution just as definitely implies that the community owes it loyal and sympathetic support, financial and otherwise.

If the hospital is to attain that position which it should have in our modern complicated society, there are certain definite problems which it must face realistically and somehow solve. Some of these problems are of a scientific character, others are essentially of a business character.

While I hesitate to risk my prophetic whiskers very far, I am willing to hazard the guess that all privately supported institutions, colleges and universities as well as hospitals, are going to encounter more difficulty in the future in their effort to secure large funds than they have encountered in the past. In brief, it is my deliberate judgment that we are not likely in this country ever to reach another stage in business in which large private fortunes can and will be developed. To you this may seem as if I were taking a defeatist attitude. Perhaps I am. At the same time, there are signs on the political horizon which simply cannot be ignored. Certainly, if politically we move to the left of the present government—and that possibility is, of course, quite discussable—such a government will rapidly eliminate existing private fortunes and make impossible the accumulation of new ones. Those who are advocates of socialized or state medicine will presumably welcome such a move. Privately supported institutions, however, must face the fact that under such a regime they would gradually starve from lack of adequate financial support. We may, of course, move to the extreme right and find ourselves by accident or design in some form of dictatorship of a fascist type. To me, for reasons which I shall not mention here, this seems extremely unlikely. If it should come, however, and if the experience of similar movements abroad has taught us any lessons, it means that the state will liquidate all private fortunes and take over all private institutions of a charitable and educational character for the glory of the state.

What seems to me to be a more likely shift in the political scenes is that the next government will move somewhat to the right of the present government. It will be known by its friends and followers as a liberal government. This, however, implies a government which would take strong and militant steps to eliminate business monopoly, restore competition, and in many ways curb the growth of large-scale business. Certainly the liberals among my acquaintanceship feel that such a government must gradually eradicate special privi-

leges, establish free markets, overthrow tariff walls, and work for a greater distribution of wealth through a system of moderate income taxes and heavy gift and death duties.

Look where we will on the political horizon, the outlook is not promising for large endowment gifts to privately supported institutions. If I am correct in this diagnosis, the hospital in modern society, particularly the privately supported hospital—just as all other privately supported institutions—must seriously consider its future; it must, in brief, consider alternative forms of support. This leads to a consideration of two other problems.

The hospital must in the future place greater emphasis upon proper organization and administration. For fear that some of you may think that this statement is unduly critical of hospitals, I hasten to say that this same statement may be just as validly made concerning educational institutions. In fact, the statement is not entirely inappropriate when made concerning business itself.

There are two reasons why hospitals must in the future place more emphasis upon proper organization and administration than in the past. In the first place, this is necessary to ensure better medical care. In the second place, increased emphasis upon problems of organization and administration is necessary in the interest of economical operation. I need not remind you that reduction of costs of operations is equivalent to the acquisition of additional endowment income. Moreover, those who are able to give money will prefer to give it to efficiently operated institutions.

In this connection it is interesting to note that business itself did not give serious and intensive attention to internal problems of management until near the close of the last century. In the early history of industry, in spite of its great productivity due to the increasing utilization of power-driven machines, the market for goods tended to outrun the productive capacity of industry. In that period businessmen did not have to worry much about such questions as markets, costs, and internal problems of management. They accordingly centered their attention upon problems of technology and production, with a view to meeting the increasing demand for goods. There came a time, however—some time after the Civil War—when the situation tended to reverse itself. Production caught up with the market and began to outrun it. It is interesting to note that during this period, business first began to give serious attention to problems of internal management. The scientific management movement, the personnel management movement, and the increased emphasis upon costs had their beginning in this period. Business took these various steps with a view to widening profit margins by reducing cost of operation. During the period referred to, business, in its attempt to widen its market and to capture new ones, began to develop salesmanship and advertising in their modern forms.

Hospitals and other privately supported institutions have had analogous experiences or are now passing through them. In the period prior to the great depression, many privately supported institutions were able to secure funds so easily that they were not compelled to worry about costs or internal problems of administration. More recently, as the sources of such gifts have begun to disappear or dry up, hospitals have been compelled to turn their

attention to internal problems of management—to problems of organization, to problems of costs, and to problems of financial management. As the sources of private support continue to disappear, if they do, hospitals must place even more emphasis upon problems of organization and administration.

It is easy to say that the hospital must place greater emphasis upon these problems. It is not, however, so easy to tell the hospital what it should do about them. As a matter of fact we know very little about the problems of organization in any field, business, education, or government. The literature in the field of business organization, although bulking large, is on the whole extremely thin and superficial. As a matter of fact there are probably not more than a dozen pieces of literature on the subject of business organization worth a second reading. Business itself knows very little about the subject. It is only recently that businessmen have begun to give the problem serious thought and study. There are in business the widest variations in organization and organization practice. To an even larger extent the comments here made are valid judgments with respect to the organization of educational institutions. Both in business and in education, the organization of the individual unit typically has not been consciously planned, but like Topsy has just grown. Schools of business which have occupied a fairly prominent place in larger universities for the past twenty-five years, although they have devoted much attention and time to a study of the problems, have not as yet made any significant contribution to this subject.

I hope I have not been too gloomy in what I have had to say about this problem. Perhaps I should now confess that we have made some progress in the study of this highly important topic. We do know that there is no one type of organization into which every business can be fitted. We have arrived at some valid judgments as to the appropriate type of organization to be fitted to different businesses. We do know that good executives can operate with reasonable effectiveness under a bad organization. We also know that incompetent personnel cannot efficiently operate an institution, whether business or otherwise, under the most perfect organization chart. But by and large the experience of business is not yet sufficiently integrated and analyzed to throw a great deal of light on the problems of hospital organization.

Many hospitals have, of course, made a brave start in tackling this problem. Those responsible for the administration of hospitals are aware of the need, and an awareness of the need is the beginning of wisdom. For the past three years the Medical School and the School of Business of the University of Chicago have cooperated, first with financial aid from the Rosenwald Foundation and now with aid from the Commonwealth Fund, in the study of hospital organization and administration and in the training of a few highly selected students for administrative service in hospitals. We do not claim to have solved many problems. We are proceeding most cautiously. We do believe, however, that we are moving in the right direction. Other experiments of similar character are being carried on at other institutions.

I might speak at great length concerning the various managerial problems which hospi-

tals face but time forbids such a detailed discussion. I wish, however, to mention the problems which I think deserve special consideration because of their importance.

The first problem relates to the internal control of operations through an effective accounting system. Accounting, as the term is used in business, is a system of records and reports dealing with day-to-day operations. These records and reports are facilitating aids to administration. Their function is to inform those ultimately responsible for the administration of an institution where the institution has been, where it is, and where it is probably going. It must be remembered, however, that the installation of an accounting system will not *per se* solve the problems of an institution. An accounting system must be intelligently conceived and adapted to the needs of an institution, and it must be carefully administered. Moreover, those ultimately responsible for the administration of an institution must understand what the records reveal and must heed the lessons which they teach. For hospitals in general, and for large hospitals in particular, cost accounting is of especial importance. Adequate cost accounting data will assist hospital administrators in the formulation of their price policies, and hospitals certainly have serious problems of price policy however they may describe them. Adequate cost accounting data will also furnish standards by which to measure internal performance. Someone has said that cost records, if intelligently made and interpreted, leave an indelible trail of performance.

In the second place, the hospital, particularly the larger hospital, has a difficult personnel problem. This problem will, in my opinion, increase in importance as time goes on. I need not remind you that the problem of coordinating the services of medical specialists is an extremely delicate one. I speak from long experience when I tell you that it is not easy to supervise and coordinate the activities of professional *prima donnas*, particularly when they enjoy what we call academic tenure.

The hospital, particularly the larger hospital, faces a difficult problem in dealing with its employees other than the medical experts. What wage policies should be formulated for these employees? Do you assume that because they are incidentally engaged in the task of medical care they must accept as a part of their compensation the satisfaction of having participated in the performance of a delicate and merciful task? Some of you have already faced the issue of recognizing unionization of hospital employees. Do you think that they should be permitted to organize freely for purpose of collective bargaining? Do you think that such employees should be permitted to strike if some issue arises which cannot be settled by patient, tolerant negotiation or mediation? I do not have any answer to these questions. I raise them to indicate that they exist, that they are likely to increase in number and severity, and that the modern hospital must face them, and must formulate policies to guide the management when and if they arise.

The hospital must select personnel who are responsible to the trustees for the effective day-to-day operation of the hospital as a business unit. Should these employees be trained in medicine? Should they be trained in medicine and business? Or should they be trained in business alone? I may say in passing that in our experiment at the University of Chi-

cago, we have been training a few highly selected individuals for this type of hospital work. With one or two exceptions, all of those who have finished their training are now serving internships or holding administrative positions in various hospitals throughout the country. In the selection of students for this course of study, we have chosen some who have had full medical training, a few with pre-medical training, a still smaller number with training only in business, and, I think, one or two who have had training in nursing prior to their admission to the course of study. Obviously enough, we are not in a position, on the basis of our limited experience, to make any generalizations as to what types of persons should be selected for training for hospital administration. But here again is a problem to which hospitals must devote thoughtful study.

The final major problem to which the hospital must give more attention in the future is the problem of public relations.

The term public relations as a function of business management is one of fairly recent origin and use. It connotes certain activities which business, either on an individual basis or through a trade association, engages in with a view to educating the public and cultivating its good will. It may consist of the dissemination of information concerning an individual business, it may consist of replies to attacks made upon a business or to clear up public misapprehensions concerning it, or it may consist of a direct appeal for public patronage. The dividing line between advertising, the function of which is to create demand, and public relations, the function of which is to cultivate public good will, is not always easy to draw. In any event, however, the function of public relations in business is to create a public favorable-mindedness with respect to the business with a view to selling more of its goods and services.

It is interesting to note that the function of public relations did not split off from the broader function of advertising and selling until a fairly recent time. And the reason for this is clear. In an earlier regime, when the business unit was smaller, there was no great need for a specialized functionary assigned to this task. The advertiser and the salesman were sufficient as messengers of good will. But in modern society, characterized by large-scale production and mass distribution of goods, consumers more and more found themselves groping in darkness in their efforts to get a fair article at a fair price in a fair bargain. As this type of impersonality in modern society increased, businesses, both large and small, began to see the need for a specialized functionary engaged in the specialized task of cultivating public good will and educating the public.

So far as business is concerned, the function of public relations is entirely appropriate, ethical, and desirable so long as the business in its activities stays within the bounds of truth and good taste. It is just as ethical and proper for an educational institution to engage in public relations of a type adjusted to its needs. You may remember that last year the University of Chicago appointed a vice-president in charge of public relations. Certainly it is ethical and proper for a hospital to engage in a program of public relations of a type adjusted to its needs. As a matter of fact, I think I am justified in making an even stronger

statement. The hospital, in view of the importance of its function in modern society, is not only privileged, but actually obligated, to engage in sound public relations activities with a view to creating favorable public-mindedness toward it and its task.

There are special reasons why a hospital, either on an individual basis or through association with other hospitals, should administer intelligent programs of public relations. In the first place, it would seem that hospitals, particularly through an association, can and should be educating the public as to its needs in the field of medical care. Medical science has, if I may be permitted again to use a business term, an excellent commodity or service to offer to the public. This it can sell to the public, without violating its canons of ethics and without offending public taste, by appropriate public relations activities.

SUMMARY

As I pointed out previously, the hospital is or should be a community institution. This implies that the community has an interest in the hospital, that the hospital owes a duty to the community, and that the community owes a duty to the hospital to give it loyal support, financial and otherwise. This ideal can only be realized in any large measure through the maintenance of proper relations with the community.

The hospital, in my opinion, particularly the privately supported hospital, is going to experience increasing difficulty in the future in securing large financial support. So far as privately supported institutions are concerned one alternative is to seek smaller gifts from larger numbers of members of the community. In a sense it is a wholesome situation in which larger numbers of persons should have this kind of interest in a hospital. It is only when a large number of members of the community have acquired a direct or indirect financial interest in an institution that that institution becomes a genuinely community institution. An intelligent program of public relations should be of great assistance to a hospital in increasing its income through increased demand for hospital care and through large numbers of modest contributions to its work.

In conclusion, the hospital is the social institution upon which we primarily rely in our attempt to conserve our great economic asset, the national health. Its function is to coordinate the services of skilled medical experts. In modern society it is or should be a community institution. It certainly has been compelled, under modern conditions, to assume many of the attributes of business. At present its position is not as safe as it should be because it probably cannot rely in the future upon large gifts as it has in the past. In this circumstance, it is incumbent upon hospital administrators to consider alternatives. As a matter of giving better medical care and as a matter of reducing costs of operation, it should give more intensive consideration to problems of organization, costs, personnel, and to other problems of internal management. In addition, with a view to increasing its total income by increasing the demand for hospital care and by stimulating the flow of many modest contributions from the community it serves, the hospital, either on an individual basis or through an appropriate association, should develop sound, intelligent, and comprehensive programs of public relations.

2. Administration and Management, *by the International Hospital Association**

THE voluntary hospitals, if they are to survive, must justify their existence. This justification necessarily depends upon the definiteness of their aims, the efficiency of their organization, the adequacy of their service, and the vigor of their administration. Today these hospitals are business undertakings. The public judges them as such. The worn-out, traditional conception of a hospital as merely a place of residence for the reception and treatment of sick people must be abandoned. The work of a modern hospital is not confined to the treatment of the sick; it includes also medical education, nursing education, social service, and research or investigation; its work is so developed and intricate that its problems are as numerous and complex as those confronting any business enterprise.

The main problem of the hospitals at the present time is definitely a problem of economics: the balancing of services demanded against the resources available for rendering such services. Income that was adequate in the days before the war not only to maintain services but to build and to create reserves, has not expanded in the same proportion that expenditure has increased. Moreover, services have increased in volume, and new ones have been developed as the inevitable consequences of scientific progress. Results of research call for new methods of diagnosis and of treatment, and no matter how costly these new methods may be, the hospitals are expected to provide them. Everywhere a more conscious-minded public is demanding greater service, better service, and the demand cannot be ignored. It must be met, but how? Increase in taxation following expansion in national expenditure has had a serious effect on the income of those who have been regular supporters of the voluntary hospitals. Contributory schemes are making up the leeway, but unless a favorable and prolonged change in the general economic structure is experienced, it is evident that income will be increasingly difficult to obtain. On the other hand it is equally evident that expenditure will tend to increase. In addition to the possibility of increased cost of commodities, hospitals are confronted with financial problems connected with shorter hours for nurses, increased salaries and wages, payments to medical staff, replacement of worn-out equipment, and the carrying out of long-delayed repairs.

It might be thought from the title of this report that the problem admits of an easy solution—merely the adoption of specified methods whereby individual hospitals may increase income and decrease expenditure. But is the problem such that it can be solved by considering ways and means whereby hospitals may recover individual economic stability? We think not. Our view is that the problem calls for (1) a clear understanding of the meaning and objectives of hospital service, and (2) a frank facing up to the fact that hospital service as at present organized is inadequate, inefficient, and uneconomical. It calls for the resolute abandonment of a search for arguments to defend existing conditions, a habit common to voluntary hospital authorities and, in place of it, the making of a thorough study and analysis of these conditions to ascertain the real purpose for the existence of the

* Adapted from Report of Study Committee on Administration and Management, *Nosokomeion* 10: 119-121, 1939.

hospitals. The implication is, therefore, that the existing organization of hospitals is not perfect, that it is capable of improvement.

Let us see if this implication is justified. Hospitals are the product of haphazard growth. They have not been deliberately planned to meet ascertained needs of the community in any area, or of the country as a whole. The state or municipal system is the creation of innumerable acts of Parliament going back hundreds of years. These acts have empowered this or that class of municipality to make institutional provision for the cure or prevention of this or that type of sickness or disease for this or that class in the community. The voluntary system has grown up independent of legislation, but it has been equally responsive to passing waves of public enthusiasm and private philanthropy, not always wisely directed, and its growth has been haphazard to the last degree.

If we take any given area we shall find a miscellaneous collection of voluntary hospitals, general and special, clinics, dispensaries, etc. We shall find municipal general and isolation hospitals; hospitals and sanatoria for tuberculosis and asylums for mental disease; lying-in hospitals, hospitals for women, hospitals for children; for skin; nerves; eye, ear and throat; orthopedic; etc. They are dotted about the area without any regard to needs. Ancient and mediaeval reasons account for distribution, and a score of accidental factors, other than the essential factors, have played their part. There is entire absence here, redundancy there; here an "open" door, there a "letter system"; here patients are charged fees, there they are exempt under a contributory scheme; there are differences of conditions regarding method of admission of patients, of nursing, of treatment, of organization, of management, of finance, and so forth. The municipal hospitals are to a great extent organized; the voluntary hospitals on the other hand are unorganized. Each is a law unto itself; it makes its own policy, its own code of regulations, raises its own funds, extends its own premises, without any reference to other institutions. Each is completely satisfied with the results of its own work and the way it is being performed.

The hospital system, if such a collection of isolated units can be called a system, has been developed only to meet the need of the time. It has not been developed as the result of scientific planning or logical scheming, and in consequence there is overlapping and duplication in both effort and material, and competition both for patients and, so far as the voluntary hospitals are concerned, for public support also. The public is almost continuously being bombarded with appeals for funds and threatened with the closing of this or that ward if the response is not forthcoming. As a whole, the finances of these hospitals are adequate—indeed each year invariably shows a surplus of income. This, however, is poor comfort to the hospitals, perhaps the majority, who year after year struggle along on a deficit, and whose service is inefficient and inadequate because it depends upon a hand-to-mouth existence. They are required to use old and worn-out equipment in out-of-date buildings often so patched up that they are a travesty of what hospitals should be.

We suggest that the facts enumerated prove the implication to be justified. The lack of systematic organization in a nation's most vital service—the health and welfare of its people—denotes a complete lack of appreciation of the meaning and objectives of hospital

service. The existing state of affairs has been developed because hospital authorities have not so far abandoned the traditional conception of hospital service. They regard it seemingly as essentially consisting of a number of independent units as distinct from a clear-cut comprehensive service deliberately planned and operated according to ascertained needs and available resources.

We consider that the problem can be solved only by the abandonment of the principle of individual units and the adoption of a scheme for the systematic organization, planning, and development of such hospitals as are required to form an adequate and economical service under unified control, in short by rationalization. The principles of rationalization are not new. The creation, in Great Britain, of the Ministry of Health, and the passing of the Local Government Act 1929, particularly that part of it relating to the systematic organization of the poor law administration, were, without any undue stretching of language, attempts at the rationalization of important departments of public administration or public services. These attempts have proved successful. Their significance is that in these cases there is a reorganization and systemization of existing arrangements, brought about as a direct consequence of a comprehensive study of the meaning and objectives of the particular services, having in view the increase of efficiency and the elimination of waste—waste which inevitably arises from traditionalism and the neglect of scientific planning and development. The principles have, unconsciously perhaps, already been accepted by voluntary hospital authorities. They have been applied in contributory schemes, in simplification, in standardization, in the use of budgets, in statistical control, in technical procedures, etc. They can be applied with equal success in the raising of funds—indeed rationalization will secure funds for hospitals which have hitherto been impossible of attainment, e.g., for the training of nurses, the compilation of medical records, for research, etc.

From this it follows that the question is not "Can hospital service be rationalized?" It is rather "Will voluntary hospital authorities accept an extension of the principles already accepted and agree to a comprehensive study of the hospital situation with a view to the rationalization of hospital service?" The municipal hospitals are already rationalized—they are making rapid progress. The elements so far as the voluntary hospitals are concerned are in greater or less degree already in existence. They do not call for creation; they call rather for readjustment and correlation.

Rationalization does not mean nationalization. Its acceptance by the voluntary hospitals will in fact have the effect of delaying nationalization, if not to put it off altogether. As part of a rationalized system the voluntary hospitals will gain strength; this strength will enable them to coordinate, on favorable terms, with the municipal hospitals.

We realize that the remedy now recommended is drastic; we realize too that the task is not an easy one and that it cannot be accomplished overnight. The subject calls for investigation—for much thought, study, and observation; it calls for the sacrifice of long cherished ideals begotten of a tradition now out of date; it calls for the closing of a number of hospitals and the amalgamation of others; it calls for the submergence of personal and institutional interests; it calls for unification, and this, in our opinion, is in the best inter-

ests of the voluntary hospitals themselves, and those of the public for whom they exist to serve.

3. Personality and Psychology in the Hospital, *by G. Harvey Agnew, M.D.**

THERE are many qualities and attributes which the hospital of today must manifest—efficiency, charity, the scientific spirit, and progressiveness, to mention but a few. None of these, vital though they be, is in itself sufficient to permit the hospital to attain the complete confidence of the people and so be able to serve their many health needs. The hospital must have a positive personality—one that inspires confidence, makes and retains friends, becomes one's first thought in time of emergency, and becomes an essential and vital part of the life of the community, yea, even of the individual.

Personality, actually, may not be as fundamentally essential as a highly trained staff, competent nurses and supervisors, good equipment and efficient organization, but of what value are all these if the public, through lack of confidence or sympathy, does not patronize or support the hospital? Personality is a very complex factor at any time and, particularly in the case of an institution, it defies analysis. But we do know that this abstract quality called "personality" will do more to determine the attitude or the confidence of a patient than all the equipment or postgraduate training proudly possessed by a hospital or its staff. We do know that years are required in its formation and that, despite this, one thoughtless or tactless action or omission by one of the many members of the hospital family may undo for a long time the careful efforts of others. Moreover, confidence is a plant of very slow growth and one that is easily withered.

It cannot be emphasized too strongly that the development of a hospital personality represents teamwork. It is the personal responsibility of every person on the staff to further the confidence of the patients, and of the public at large, in the hospital. Naturally it is a heavier responsibility upon those who have frequent contact with patients and with the public generally, but even those who never have contact with the patient can do their share by maintaining all services at maximum efficiency and by impressions conveyed to their own social contacts.

This, then, leads us to consider the psychology of hospital relationships. Most of the public criticism of hospitals could be eradicated if proper psychology were consistently applied in our public relationships. Of primary importance is the psychology of dealing with patients. We all know that patients who are physically ill are also mentally ill and that most people are suspicious of hospitals, to say the least, and perhaps prejudiced against them. The patient is introspective, anxious, and critical; his illness is, to him, the most stupendous event since Noah ordered all hands ashore. He is impressed by minor incidents—a hasty, impersonal, and, to him, indifferent or even callous reception at the hospital; an unprepared room; or perhaps the room or the bed itself too cold; apparent delay at time of admission; a lukewarm meal or a curt command. The reaction of a patient can never

* Adapted from *Hospitals* 11:23-24, Dec. 1937.

be reduced to a formula. The hospital attitude must be delicately balanced, a mixture of cold science and warm compassion; of hard-headed business economy and cost-disregarding charity; of administrative efficiency and yet with methods of such flexibility that the efficiency is attained without friction or rancor.

The best hospitals today give up many object lessons. The doorman simply breathes cordiality; the admission clerks could not be more solicitous; the touch of the nurses is as gentle as sleep itself; the interns and technicians have the dexterity of magicians as they extract blood and spinal fluid; even the maids and cleaners seem to be trained in deportment and courtesy. Everybody in such hospitals has developed "graciousness"—an almost forgotten characteristic in this age of cold efficiency and plain dealing. Patients appreciate, too, the frequent visits by the supervisors and administrators and the efforts of the dietitian to make their meals attractive. An official "hostess" can do much to comfort the patients. They like the information booklets issued to them, the tactful way in which the necessary business arrangements are completed, the care taken of their clothing and valuables, and the tea served to anxious relatives; the routine use of a "satisfactions slip" enables prompt correction of many overlooked details. A recent writer very aptly referred to "the significance of the seemingly insignificant."

The psychology of dealing with relatives is the rock upon which many hospital ships founder. The day of forbidding, iron-clad prison regulations is definitely over and patients are rightly treated as guests, not as inmates. True, from the viewpoint of the busy nurse or the housekeeper, relatives may often appear as unmitigated and not always necessary nuisances; nevertheless, much latitude and, always, the utmost courtesy must be shown. Much of the responsibility for creating a favorable impression rests upon the nurse and the intern, who bear the brunt of so many interrogations. Full explanations (where indicated) must be carefully and patiently made. The information clerk and the switchboard operator have an amazing influence, too, in molding public opinion. The utmost care must be exercised in selecting personnel for these positions.

The medical staff presents its own particular psychological difficulties and administrators realize only too well that more superintendents have come to grief over these problems than because of any other. The situation is especially difficult, too, for the lay or nurse administrator. Medical men as a class are inclined to be individualistic—their work makes them so—they are naturally sensitive to any aspersions or reflections on their ability or reputation and consequently are jealous of their prerogatives. Moreover, they are usually overworked, tired, and irritated by the continuous impositions of thoughtless or selfish patients. By far the best plan is to let the medical staff work out its own problems; only if it fails should the trustee step in. Staff organization should be encouraged, adequate facilities provided, and everything done to encourage a progressive and scientific atmosphere. Sympathy with administrative difficulties and support of diagnostic and therapeutic services can be developed by occasional talks to the medical staff and by periodic, carefully worded circular letters. The subject of records requires the utmost tact and diplomacy on the part of record committees.

The handling of personnel is an art. Fortunate indeed is the hospital with an administrator and board of trustees so qualified. The interrelationship of the personnel must be carefully planned; duties must be so assigned that there is a maximum of teamwork yet ample scope for individual development. Departments must have a certain amount of, but not too much, autonomy. Overly democratic *camaraderie* on the one hand and overly strict discipline on the other must be avoided; centralized authority must be promptly effective and ungrudgingly recognized. Above all there must be a family spirit, a feeling that each one is working with *esprit de corps* for the patients and for the hospital.

Loyalty is most manifest when all dealings are fair and judicial; when eavesdropping and talebearing are discouraged; when situations are promptly settled but not before both sides are heard; when nagging is avoided and when the latchstring of the office door is always out. Trustees and administrators must bend backward in avoiding those personal friendships and intimacies which might lead to possible accusations of favoritism, no matter how unwarranted. A loyal staff can be developed, too, by placing more responsibility upon them. That implies taking them into one's confidence. Regular departmental or staff conferences stimulate self-respect and responsibility. A spirit of cooperation soon replaces that of resentful independence, so characteristic of certain people. The importance of the major objective—the welfare of the patient—and the menace of egocentric behaviorism should be thoroughly appreciated by all. Those who persistently fail to cooperate should be replaced.

And finally there is the psychology of dealing with the community. This is an era of advertisement and the devil often does take the hindmost. Your publicity program may well include an annual report of the modern graphic type (not of the soporific wastebasket variety); talks to various organizations; a good Hospital Day program; and systematic, not sporadic, press publicity. Your press relationships should be carefully developed. Reporters and editors are very human; they appreciate courtesies and, if they are frequently permitted to share your confidence, will almost invariably respect your wishes and the ethics of the situation. Governmental relations, state or provincial and local, must not be overlooked. Play fair with these bodies, but do not play politics. Prompt, full, and unequivocal returns are appreciated and the effort will be repaid a hundredfold when some legislative protection or other support is desired.

Furthermore there is a right and a wrong way of dealing with other hospitals. If it pays industry to work together, how much more vital is it for hospitals to develop the same team spirit!

Has your hospital a positive personality?

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CHAPTER V. THE HOSPITAL ADMINISTRATOR

1. The Hospital Administrator, *by a Study Committee of the American College of Hospital Administrators**

AT the head of the hospital, responsible for the physical plant and for every act committed therein, is the governing board. In direct charge, representing and responsible to the governing board, is the administrative officer, commonly called the superintendent but better designated as the administrator. The title superintendent implies only supervision, whereas administrator implies initiative and leadership as well as supervision, two qualities very necessary in the administrative head of the hospital.

The relationship of the administrator to the governing board is primarily that of "servant and master" but it is not to be interpreted in the usual sense of the phrase. The hospital is a special type of organization in which the relationship is almost that of a managing partner. He is, nevertheless, a servant employed by the governing board who can be discharged at any time for cause. The governing board carries all ultimate responsibility so must determine all policies and must be kept informed of everything that goes on, particularly results, both financial and medical. Although responsible, the governing board cannot devote sufficient time to the hospital to personally know detail to the extent required and to determine results, nor should this be expected of it. The governing board therefore delegates administrative authority to the administrator and must depend on him to report results and any detail that may be desired as to how these are produced.

There is found often a peculiar psychology in the members of the governing board of a hospital which does not exist in any other business organization and which must be carefully guarded against. Businessmen, who in their own businesses know that they cannot devote sufficient time to detail to insure efficient administration, employ managers and, so long as they produce satisfactory results, do not interfere with their management. These same men, as members of the governing board of a hospital, with less time to devote to detail and less knowledge of the problems of hospital management, frequently feel it their duty to take an active part in the management thereby handicapping the administrator and undermining his authority. He should be treated the same as a skilled manager in any other business. He should have general policies stated to him and be expected to manage the business in accordance with these policies, and the management should be left to him.

It is the duty of the administrator to attend all meetings of the governing board and of its committees. He must not only carry out stated policies but he must also have for his guidance the unstated intentions back of them. Moreover, being the only person who is familiar with the work of all departments, he should be available for advice in shaping policies. There should be the utmost frankness between the governing board and the ad-

* Adapted from *The hospital administrator; an analysis of his duties, responsibilities, relationships and obligations*, Chicago, American College of Hospital Administrators, 1935.

ministrator. The consensus is that the administrator should not be a voting member of the governing board but that he should be required to attend all meetings and should have the privilege of discussion in all questions that arise.

The administrator should prepare a budget for approval by the governing board. This budget will show, first, the estimated receipts of the hospital, giving an idea as to the deficit expected from free work and advising of the amount that must be raised from sources outside ordinary revenue. Raising such funds is primarily the duty of the governing board but the administrator may be required to assist by preparing statements for general circulation or even by taking part in drives and similar means of raising money. On the other side the budget should show the expected expenditure in detail and, when approved by the governing board, becomes the administrator's authority for expenditure within the limits of the budget. In this expenditure he should have authority to make transfers from one department to another but such transfers should be duly authorized by the governing board. He may find that increased expense is inevitable in some departments which can be offset by savings in others.

The administrator should have full authority in employment. Within the limits of the budget he should fix all salaries and have full authority to employ and discharge. He may never use the authority to discharge, but without it he cannot maintain discipline.

The administrator should have full administrative authority. In conformity with this authority he drafts his plan of organization and formulates such rules as may be necessary for the guidance of the personnel, these always being in conformity with the policies of the governing board.

The administrator should report periodically in writing to the governing board. Usually such reports will be made monthly and yearly, the latter being a summing up of the achievements of the year past and an analysis of plans for the coming year. The monthly reports should contain a financial statement showing such information as may be requested by the governing board. There should be uniformity in the arrangement of these reports from month to month so that comparisons may be made readily. Following the financial statement, there should be a report based on the medical audit conducted by the staff. This should show health results as clearly as the financial report shows financial results. It should be free from technicalities and expressed in such terms as are readily understood by one not medically trained. Finally, the reports should call attention to matters that are undesirable and should suggest remedies. These will include changes in construction, additions of equipment not provided for, changes in the medical staff, and other matters which are beyond the authority of the administrator.

Intramural Relationships and Responsibilities. Under the system in vogue in the United States today the administrator is the executive head of the hospital, responsible to the governing board for efficient management. Such being the case, he must be given complete authority in administration and he must collaborate with the medical staff in order that the patient may be restored to health as quickly, safely, and pleasantly as possible. In the accomplishment of this objective he has to perform certain duties that will coordinate the

activities of the entire organization and will promote the welfare of the personnel. Since these duties encompass a vast amount of detail the administrator will find that his work will be simplified and more complete understanding will prevail on all sides if he will interest himself in the formulation of a body of regulatory rules often referred to as the Constitution and By-laws or Rules and Regulations. These are necessary for the guidance of trustees, the hospital organization, the staff, and others who may be interested in the institution. They constitute the authority of the administrator and furnish the background for the many decisions which he must render. Such rules should set forth in rather general terms the policies of the hospital and should be all-inclusive but not too detailed. They may and should be supplemented by more detailed rules for the guidance of hospital employees and others who come in contact with the institution. The force of board action in the adoption of such instrumentalities is of inestimable value to the executive officer.

The administrator is a liaison officer between the governing board and the different departments of the organization. It is his duty to see that policies laid down are followed. He must therefore transmit and interpret them to the medical staff and personnel; likewise, it is his duty to transmit their ideas and wishes to the governing board.

He must coordinate the activities of the medical staff and of the departments staffed by the personnel. In so far as treatment is concerned the attending physician is in authority. His orders are given to the resident staff, heads of departments, nurses, and all others concerned with the care of patients and it is the duty of the administrator to provide that these orders shall be carried out unless they are in direct violation of the policies laid down by the governing board.

It is necessary for the administrator to coordinate the efforts of the departments within the organization in order to prevent any clashing of interests or overlapping of time and effort. In this connection he will be readily available for conferences with the heads of the various departments not only by appointment but also for the handling of emergency problems when they arise.

As has been previously intimated, coordination of effort may be accomplished to a large extent by detailed regulations which are commonly referred to as standing orders. These are issued by the administrator, and by establishing fixed routine wherever possible they greatly facilitate the work of the hospital.

Standing orders are of two classes, those dealing with the professional care of patients and those dealing with administrative affairs. The former are usually worked out by the administrator in conference with the medical staff; the latter originate with the administrator and are his direct orders to the personnel. Standing orders may be elaborated to include other coordinating influences which are too important to overlook. Organization charts indicating the division of labor and lines of authority clarify the functions of the various departments of the hospital and help to prevent overlapping and the resulting friction which usually develops out of failure on the part of department heads properly to appreciate the limits of their respective functions. The organization record is valuable as a supplement to the organization chart. In this the duties and authority of each worker are

put into written form and little is left to his imagination so far as his place in the organization is concerned. Administrative charts help to clarify procedures by making use of diagrams illustrating such methods as those used in obtaining supplies, those by which charges against patients are accumulated, etc.

There are certain other agencies which contribute to smoothness of operation. Frequent conferences with the administrative staff of the hospital help to solve satisfactorily both old and new problems. In work which is as complex as that of running a hospital, it is highly important that the executive have the benefit of competent advice which frequently is rendered best by committees whose members have had experience with or opportunities to study the particular problem concerning which advice is sought. The administrator will be familiar with and make use of the various systems by which the several departments of the hospital are held in permanent relation to one another. Examples are the requisition system by which supplies or services are obtained; the record system which accumulates, classifies, and files all information pertaining to patients and employees; the accounting system which looks after financial, cost, and function accounts; the communication system; the admitting system; etc. In small organizations the contact between management and workers is intimate and policies and practices are well understood as they develop gradually through the establishment of precedents and traditions. As the institution grows and the personnel changes, confusion develops among the personnel. To correct such a condition or to prevent it the manual or handbook has been introduced in industry and might well be adopted in the hospital field. It is a valuable contribution to the coordinating influences in any large organization. Systems of reports by which the administrator is promptly informed of unusual occurrences save many situations which might otherwise be very embarrassing. In addition to establishing such of these methods as may be applicable to his institution, the administrator should spend a portion of each day, if possible, in making rounds about the hospital to gain first-hand knowledge of the operation of the various departments and activities.

The administrator will provide facilities for all departments. This will include physical accommodation and the equipment and supplies which each department requires for the performance of its duties. The administrator is limited in his efforts to provide accommodation by the construction of the physical plant and may have to accommodate his activities to existing conditions over which he has little control, but in the matter of equipment he has a freer hand. Equipment is constantly requiring replacement, and when this becomes necessary the counsel and recommendations of heads of departments should be sought.

The administrator selects all department heads. In order to perform his duties it will be necessary for the administrator to delegate part of his responsibility to assistants or selected heads of departments, the extent of this delegation of responsibility and authority depending largely on the size of the hospital. But even though duties are delegated, the administrator is ultimately responsible, and these assistants and heads of departments must be directly responsible to him. In making these selections, therefore, the greatest care must be

exercised. Once selected each will be given full authority in his or her department. Each must be skilled in his or her particular field, willing to take orders from those in authority, willing to coordinate with other departments, and able to manage those employed in the department.

The administrator must be certain that all personnel are physically fit. It therefore becomes his duty to arrange for a physical examination at the time of employment and for periodic reexamination thereafter. In case of illness during employment, it has been customary for the hospital to take care of employees. In case of accident or illness arising out of employment, care is provided under the workmen's compensation laws of the state. In case of non-compensable illness, care may be given free, at cost, or at reduced rates, but in any event it is the duty of the administrator to see that care is received for a reasonable period. In this connection it should be stated that there is an increasing tendency among hospitals to provide certain sick benefits, retirement pensions, and death benefits. Where such plans are in operation, the expense is frequently shared by the hospital and the employee. The administrator will be rendering an excellent service to his institution and his employees if he will investigate the merits of these plans, recommending the adoption of policies of this nature if circumstances warrant such action.

The administrator should be interested in the social activities of the personnel, particularly of those living in the institution. His interest should not be in the nature of interference but rather he should encourage social intercourse when off duty and render all assistance possible in promoting recreation and amusement when called on to do so.

The administrator should be interested in educational activities of the personnel. There are certain fixed courses in several of the departments, but in addition general educational efforts should be going on constantly among all classes of employees, and leadership will usually be taken by the administrator.

In the smaller hospital the relationships between executive and employee and between employees are very simple; directions are for the most part verbal and relations in general are quite elementary. As the hospital grows the number of workers increases and relationships become more and more complicated. Division of labor necessarily appears and sooner or later each employee finds himself associated with and interested in a certain part of the work. When this stage of growth is reached, it is perfectly natural to organize all of those performing closely related duties into groups or departments in order to facilitate the administration of the affairs of the institution. The administrator coordinates the work of the several units.

The division of the work in hospitals is usually made on the basis of the functions to be performed. The administrator selects a number of people and assigns one or more functions to each according to his interests and his ability to perform or cause to be performed the particular tasks associated with that function or those functions. These people are the department heads. They constitute the hospital staff and each is responsible to the administrator for successfully carrying on the particular function or functions of the institution

which are assigned to him. In a very large hospital each function might represent a department, whereas in the smaller hospitals a number might be grouped under one department head. These functions arrange themselves naturally into two classes, the one having to do with the service and maintenance aspects of the hospital, the nonprofessional, and the other with the care of patients, the professional and subprofessional.

The nonprofessional departments, for the most part, come within the domain of the business manager in hospitals that feel the need for the type of organization which includes a business manager. This fact has no particular bearing, however, upon our references to these departments as units of the organization. If there is a business manager, the administrator merely delegates to him the responsibility for the proper functioning of such departments, otherwise the heads of these departments are directly responsible to the administrator.

Legal decisions in practically all states of the Union have thrown on the governing board of the hospital responsibility for seeing that the patient has proper care and the administrator, as the representative of this body, must assume that responsibility. But as administrator of the hospital, it is obvious that in most cases he cannot actually prescribe treatment. For this purpose the governing board appoints a medical staff, exercising due care in its selection by seeking advice from the existing staff through the administrator. Ordinarily the administrator acts as a liaison officer between the medical staff and the governing board, but in some hospitals there are joint conference committees consisting of board members and staff members who meet with administrators to discuss and solve the purely medical problems of hospital administration. The danger in this type of organization is that the joint conference committee will overstep the bounds of propriety by enlarging the scope of its activities to include more than the purely medical phases of hospital administration. A more desirable arrangement is created through the appointment by the staff or its executive officer of a medical advisory committee of the staff to confer with the administrator on matters of staff interest. The executive committee of the staff may act in this capacity. The administrator relays the wishes of the staff as expressed through the committee to the governing board, and he may if it seems desirable in the case of highly technical matters ask the members of such advisory committee to assist him in his representations to the governing board. Incidentally, staff members should not be asked to assume the anomalous, dual role of board member and staff member because this arrangement is incompatible with sound principles of organization. The preservation of the liaison characteristics of the administrator's position will be found to be highly desirable at all times. Deviations from this conception of the administrator's place in the organization lead to trouble sooner or later. The organization of the proprietary hospital represents a somewhat different problem which need not enter into present considerations.

It is the duty of the administrator to see that the policies of the governing board as they apply to the medical staff are followed. In this respect he will, should occasion arise, prevent the carrying out of any line of treatment that is contrary to these policies. This will

apply to such matters as illegal operations and treatment contrary to the practices of regular medicine. In case of flagrant and intentional violation of such policies, he will take up with the governing board the matter of disciplinary action.

It is the duty of the administrator to see that only authorized physicians are allowed the privileges of the hospital. As a rule appointment to the medical staff is formally recommended by the existing staff through the administrator and appointment is made by the governing board, but it is customary to give the administrator authority to permit a known physician to attend patients until formal appointment can be made. In case of doubt or lack of information, he will usually confer with the chief of staff or with an authorized committee.

The administrator will see that all patients are properly assigned to staff physicians immediately after admission and that they receive prompt attention. In the case of all free patients and of those paying patients who apply for admission but have no attending physician, it is advisable to have definite rules for assignment formulated by conference with the staff.

The administrator should attend all staff conferences. He should be privileged to take part in discussions.

The administrator will see that all orders for treatment are in writing, except in emergencies, and will instruct the personnel not to accept or carry out verbal orders. This is a necessary protection of the patient, the hospital, and the physician against misinterpretation, misunderstanding, and forgetfulness.

The administrator will engage and control the resident and intern staff if such is authorized. In this it is customary for him to confer with the delegated representatives of the medical staff in the selection and in formulating general rules of conduct. As the administrative head of the hospital, he makes the individual contracts and assigns the members of the resident staff to duty in accordance with the rules laid down. They are instructed to take orders for treatment from the attending physician, but in addition they may, with his consent, carry on treatment as they show themselves qualified. Otherwise, they are responsible to the administrator.

Extramural Relationships and Responsibilities. The duties of the administrator cannot be limited to his own hospital or even to his own community. All hospitals are maintained ultimately by the community in order that it may have service, and this service can be secured to best advantage by cooperation. It is true that to a certain extent the hospitals are business rivals, but this should be a rivalry which makes for better service and results in better business for all. Coordination of effort, mutual discussion of common problems, and frank study of methods of management and of meeting local problems will prove of benefit to all.

Outside the individual hospital the administrator contacts the smaller organizations such as local and state associations, and still further afield the national associations. It is his duty to belong to and attend meetings of the local, state, and national organizations. While there is a great deal of pleasure to be derived from such conventions, the object is primarily

work, and attendance is a duty if the administrator is to keep in touch with the most recent advances. It is not sufficient that he attend meetings; he should participate in the hospital research that is being constantly carried on; he should give the benefit of his experience to others by taking part in discussions and presenting papers regarding subjects about which he is qualified to speak. Apart from this direct contact with others in the hospital field, he will keep up to date by constantly reading hospital magazines and other hospital publications. When he has the opportunity to do so, he should hold office and serve on committees.

The administrator will cooperate to the fullest extent with organized medicine as represented by medical societies, and if he is a physician he will be a member of such societies. This cooperation will consist of admitting only licensed, regular physicians to the privileges of the hospital, of assisting in the educational programs of the societies, and of supporting the general policies of the societies as occasion arises.

The administrator of the hospital should be a leader in the community, particularly in respect to any section of it which directly or indirectly contacts activities in his own particular field—the hospital. His relationship to the unorganized community at large is somewhat difficult to define since the results are so intangible. Relationships and duties extend into his personal and social life where he makes acquaintances in social and community organizations. It is not, however, inferred that acquaintances and contacts are deliberately made in this manner with a view to ultimate benefit in a business capacity. On the contrary, the administrator of the hospital must have periods of relaxation free from business worries if he is to be efficient, but social acquaintance leads to better mutual understanding when the hospital and its administrator are contacted by these same people in a business relationship.

More tangible are the administrator's duties in relation to community organizations, such as luncheon clubs, chambers of commerce, women's clubs, and similar bodies. All these organizations are avowedly interested in public welfare in which must be included the care of the sick, and it is definitely the duty of the administrator to be familiar with all and to neglect no opportunity to inform them in matters concerning which he is qualified to speak.

Duties toward the public health organizations of the community form a part of the work of the administrator. The public health department is an organization of the community existing for the prevention of disease, an activity in which the hospital is vitally interested. Whether he is compelled by law to do so or not, the relationship of the administrator to community health requires that he cooperate to the fullest extent in reporting communicable diseases, births, deaths, and similar statistics, as well as in supporting public health clinics such as the venereal, tuberculosis, prenatal, or postnatal. At times clinics such as these are not under the public health department but they should be supported nevertheless, provided they are ethical.

Education of the public in medical and health matters is one of the recognized ethical activities of medicine and in this the administrator has a duty. He is particularly familiar

with the hospital phase and will always be available to furnish information along this line. His activity in this direction will not stop the conveying of knowledge as to the functions of the hospital and of teaching the advisability of using its facilities. The community is interested in knowing whether it is sufficiently supplied with hospital accommodations, not only whether there is a surplus or shortage of beds but whether the services are of the type and quantity required by the particular community. If there is more than one hospital, there should be coordinated effort in this direction. Surveys should be made at intervals determined by rapidity of change in the community, embracing not merely a census with determination of the number of beds required according to national averages, but rather a study of the particular community and its hospitals. They should determine the types of beds required, whether pay or free, whether medical, surgical, obstetrical, or other, whether industrial accidents, road hazards, and similar conditions require special facilities. The survey should then consider how these needs are supplied by existing hospitals, whether re-allocation of beds cannot better meet the needs and, if not, how and where additional hospital facilities may be provided to best advantage.

If the time comes when alterations or additions become necessary in his own institution, the administrator should supervise planning and construction. It is not necessary that he be an architect but he may be capable of drawing rough sketches to give the architect the ideas which he is expected to carry out, or if he cannot do this, he should at least be qualified to criticize and correct the sketches submitted by the architect. This is both a duty and a privilege which will result in alterations or new construction so designed as to function to greatest advantage.

The relationship to the press is one that is often misunderstood. On the part of the administrator, there is usually a clear conception of the educational value of the press, but often there is a lack of appreciation of the fact that the newspaper requires and must have news which the hospital can furnish. It is clearly the duty of the administrator to use the press to the fullest extent as an educational medium but, if he is to have this privilege, he must give something in return. A clear and definite understanding will result in cooperation. Newspaper reporters are extremely reasonable people. If they find that the administrator of the hospital is willing and anxious to give them all the news that he legitimately can, they will always be satisfied when he refuses to give information for the reason that it is of such a nature that he is forbidden to divulge it. Such fair dealing will not only earn space for educational purposes but it will create for the administrator and his hospital one of the most valuable allies that can be secured in dealing with the general public.

The relationship to auxiliary organizations involves most important duties. The women's auxiliary and similar organizations are most valuable to the hospital and no person other than the administrator can so well guide the use of their energies to the end that they and the hospital may reap the greatest benefits. He should be thoroughly in sympathy with such organizations and if he makes it plain that he appreciates their efforts and that he is willing and anxious to guide them into channels where they will render greatest service, it

is to him that they will come for advice. If he fails to take this attitude, they will naturally turn to the governing board, going over the head of the administrator. This will, in turn, lead to an attitude of authority and independence which will eventually wreck either the administrator or the auxiliary. It is, therefore, clearly the duty of the administrator to co-operate with all such organizations to the fullest extent.

Finally, all contacts between the public and the hospital must be pleasant and it is the duty of the administrator to see that they are so. This applies to both the sick and well. Often the patient must be refused accommodation which he cannot afford or some privilege which would not react to his benefit. Often visitors will be a greater source of trouble than the patients themselves and must be denied privileges which would be contrary to the best interests of the sick. At times severe methods must be taken to collect accounts which in ordinary justice should be paid. All such matters can be adjusted in a manner that will not give offense and in nearly every instance the person concerned will realize that sympathetic justice is being done. Discourteousness and brusqueness must never be tolerated. All this is a duty imposed on the administrator if his relationship to the public is to be of that pleasant nature which will result in entire success.

2. Administrative Intern, by *Claude W. Munger, M.D.**

No person should be encouraged or even permitted to train for hospital administration unless he or she possesses a solid groundwork of education, a definite interest in the field, and, preferably, some sort of preliminary experience or association with hospitals. Academic preparation for hospital administration is extremely valuable and the ideal combination would comprise (1) an adequate background of general education, (2) a specialized academic course in hospital administration, and (3) a period of well-supervised experience in an outstanding hospital. In general, I would want my students to have either an M.D. degree plus a medical internship or a bachelor's degree plus hospital experience or a definite interest in the field.

A nursing course *per se* is not a sufficient background; any nurse should have a general education equaling or exceeding a baccalaureate degree. Nevertheless, women of proper qualifications have a place in this field and, especially in the smaller hospitals, they find real opportunity. Good nursing is essential to successful hospitalization but other phases of the work are just as important to well-rounded success. Similar criticism may be made of some other specialists who have essayed to administer hospitals. The physician who permits medical practice to dominate and the business efficiency expert who concentrates upon the balance sheet to the neglect of the humane and the professional objectives are examples not infrequently encountered.

The administrative internship cannot work miracles. The extent to which a student can advance will depend upon his groundwork of education, his personality, and his adminis-

* Adapted from *Mod. Hosp.* 53:61-63, Sept. 1939.

trative ability. Hospitals differ in size, in problems, and in aims, and there are places in hospital administration for nonmedical persons as well as for doctors. This fact complicates our training programs but should be acknowledged.

In seeking promising candidates for the career of hospital administration, we should not forget hospital departmental workers. Basic educational requirements, however, should seldom be relaxed even for experienced persons. It must be agreed with the student at the outset that the period of training is to be long enough to give him a complete view of the many phases of a complicated profession. Therefore, it is better not to promise completion of training at any definite date.

In selecting candidates for training, personal characteristics that are likely to promote success must be looked for. Hospitals need administrators who are humanitarians, energetic men and women able to meet people and to assume leadership. Hospital administration holds no place for the educated sophisticate, the petty martinet, or, above all, the man who wants an easy job. Quiet persistence, tact, a judicial attitude, good appearance, a sense of humor, and the ability to speak and to write about the hospital's work are valuable attributes. Those who have failed in other fields and who seem likely to repeat the process in hospital work must be avoided.

Compensation should not be a primary consideration. The main or only return of the student during his training period should be instruction received and practical experience obtained.

The practical training will have to be varied according to the background of the student. It is preferable that the student live in the institution; only through this intimate association can he understand and appreciate many of the more subtle problems that the administrator faces. In a large hospital it may be worth while for the student to shift his living quarters and dining room seat two or three times during the period of administrative internship in order that he may more thoroughly appreciate the viewpoints and problems of the principal groups or types of employees.

Before actual work assignments are made the student should meet the principal officers of the hospital. It may be well for the administrator to introduce him at the meeting of department heads, explaining the purposes for which he has come to the hospital and soliciting the help, in his training, of all departments. He may be assigned to take the minutes and to do the necessary follow-up work in relation to the meetings of department heads.

The administrative intern's training should be begun by the administrator personally and, as he follows through the various hospital departments and activities, he should be constantly in touch with the executive.

Working assignments for an administrative intern who remains eighteen months in a hospital will be suggested. Under this simple plan, the length of the internship can readily be increased if desired. Persons of unusual preliminary preparation may possibly require less training but, in general, the longer period is desirable. The content of internships probably will not vary widely in different hospitals, even though the order and emphasis in presentation may vary.

The student should have a desk in the administrator's outer office during the first two months. It is helpful at this period for the student to work closely with the secretary to the administrator, to observe and later to assist her with her work. At the outset there should be daily sessions with the administrator, who will acquaint the student with the organization plan of the hospital and with his own theories and methods in management. Within the first week the student should be assigned a course of collateral reading and should be introduced to the journals dealing with hospital administration. The reading list will naturally reflect the preferences of the administrator and should give consideration to the special requirements of the student.

Suggested titles for a collateral reading course include: *Training for the Administrative Career*, Davis; *Hospital Organization and Operation*, Chapman; *Life of Pasteur*, Vallery-Radot; *Hospital Organization and Management*, MacEachern; *Legal Aspects of Hospital Practices*, Hayt and Hayt; *Hospital Survey for New York*, selected reading in all three volumes; *The Care of the Patient*, Francis Weld Peabody; historical matter, if available, concerning the particular hospital; *The Great Doctors*, Sigerist; regular reading of digests of articles on hospital matters contained in monthly issues of *Hospital Abstract Service*; *Problems and References in Hospital Administration*, Hartman; *American Hospital of the Twentieth Century*, Stevens; and the professional journals, *Hospitals* and *The Modern Hospital*. In addition, the student needs practice in the use of the Directory of American and Canadian Hospitals; state medical directory; A.M.A. Medical Directory; A.M.A. lists of Registered Hospitals, Approved Internships and Residencies; American College of Surgeons' List of Approved Hospitals; *The Hospital Yearbook* (check lists, lists of dealers in hospital commodities), and the *Directory of American College of Hospital Administrators*. The student should establish a relationship with the hospital librarian, who will assist him in obtaining assigned reading material. Ready access to the hospital library will enable him to browse among medical as well as administrative material.

A helpful means of giving the intern a grasp of the administrator's work is to assign him to open and read the mail that comes to the administrator's office, both intramural and extramural. He should bring the letters to the administrator at an appointed time, sitting with him while the mail and the problems that it contains are examined. He should be permitted to listen to telephone calls that the administrator answers and to learn how he handles them. He should sit in the office during nonconfidential conferences with department heads or others.

As soon as the student begins to gain some understanding of the work and has become acquainted with the personnel, it is well for him to act as the administrator's messenger to department heads and others in order to obtain departmental information on specific problems. He can transmit special orders to the department heads, explaining them in more detail than is possible in a written order and bringing back the impressions and comments of the department head. Such activities will give the student a general view of the hospital and will begin to give him experience in dealing successfully with varying personalities, a technique that he must master if he is to have a successful future.

Admission of the intern to the administrator's office at the outset of his course conveys the impression to the subordinate staff that the training project is an important matter in the mind of the executive. This reaction will gain the more active help and cooperation of department heads.

From the third to the sixth month of training the student should continue to spend about two hours in the administrator's office each morning to prepare the mail, to be available for conferences, and to receive special assignments. The remainder of each day should be spent in some one of the departments where the student should act, so far as possible, as a working assistant to the department head. It is believed important for him actually to see all aspects of hospital procedures as they are carried out. If the student later becomes a hospital administrator, he will not be able personally to supervise all the details of the hospital's work, but he can much more successfully judge performance and deal with problems that come to him from the departments if he has a personal familiarity with the details of their operation.

Nonmedical persons who are being trained for hospital administration should see medical, nursing, and other professional procedures in detail. They should be permitted to follow individual patients through the hospital from the out-patient admitting desk through the clinic to the hospital admitting office, the ward, operating room, and on through to discharge.

The student should make and record several case studies of individual patients, with an interpretation of the reasons for the various procedures and with an evaluation of the efficiency with which the various phases of the work for that patient are executed.

Lay persons who expect to administer hospitals must be permitted to witness as many surgical operations and like procedures as seem necessary to give them a clear knowledge of these procedures and of the administrator's relation to them. They must learn the details of postoperative care and understand the various nursing and special procedures that are required for the patient. Naturally, this is the most difficult part of the training of a nonmedical person, but it is the most important part of the work to him because of his lack of such knowledge. If the assistant administrator is a medical person he should supervise the actual case studies that the student makes so that the student may understand clearly what was done and the reasons for the action taken. The administrative intern should be encouraged to fraternize with the medical interns and residents from whom he will absorb much useful information concerning professional work and problems.

After the student has had his introduction to this most important phase of the hospital's work, i.e., direct service to patients, he should have working periods in the various departments, such as dietary, housekeeping, physical therapy, social service, power plant, accounting, and laundry. It would be well if he could complete a short term of duty in each department by the end of the sixth month.

From the seventh to the tenth month the student, continuing his two-hour morning period in the executive office, may be assigned to work on special problems such as the follow-

ing: (1) a plan for reducing the consumption of electric current in the hospital; (2) a plan for the conservation of clean linen supplies; (3) a system for key issuance and control; (4) specifications for new equipment that may be needed, following through all the steps of purchase, receipt, approval, and installation; (5) devising and putting into operation in a storeroom a system of perpetual inventory; (6) detailed study of the nursing care and nurses' time for several cases; (7) a plan for controlling the use of proprietary and other unnecessarily expensive drugs.

The foregoing special problems are merely suggestive. It is desirable to place emphasis upon the medical phases for the nonmedical intern and upon the business phases for the intern who is a physician or a nurse. The administrative phases will be instructive to both groups.

For the eleventh and twelfth months, or elsewhere in the course if more convenient, the intern should assist with the details of the preparation of an annual budget and an annual report, daily contacts with the administrator being continued.

From the twelfth to the fourteenth month the student may act as a "trouble shooter." He can be assigned to investigate exhaustively complaints from patients, employees, and outside persons, formulating a recommended reply, administrative action, or other solution of the trouble. He should still continue his daily connection with the administrator's office and should continue any studies still incomplete from the previous period. Throughout the course he should continue to read books and especially current journals relating to hospital work.

The intern should attend medical staff meetings. Here he can make himself welcome by helping the secretary or by operating the stereopticon. He should be unobtrusive but "all ears" at these meetings. He should be enabled to go to monthly meetings of the local hospital council, if any are available. Toward the end of his course the administrative intern should be encouraged to attend at least one state or sectional hospital convention. He should by all means have the inspiration provided by attendance at a convention of the American Hospital Association. If the American College of Surgeons meets within a reasonable distance, it would be well for him to attend the excellent hospital conferences that the College sponsors.

The fifteenth (or some other) month should be devoted to vacation and rest, followed in the sixteenth to eighteenth months with a period in which the student will act as executive secretary to the director. During this time he should assist with any or all of the work in the director's office and his work should be watched closely as an aid to his mentor in determining the extent to which he can recommend him for future responsibilities.

Of greatest importance to the student himself is the degree of interest the administrator is willing to take in the very considerable educational job of his training. No administrator should lightly assume this heavy responsibility. It would be very wrong to agree to do the job and then do it poorly. Not only would the student suffer but, if he failed to make good, it would bring embarrassment to his teacher as well.

It goes without saying that the administrator who undertakes to train an apprentice will have to make many sacrifices of his own time and energies. The satisfaction, however, of seeing a protégé learn, develop, and mature in hospital administration is considerable.

The long and intimate association necessary between administrator and administrative intern can scarcely succeed except between personalities that can function together. The necessity of selecting the student with great care is, therefore, reemphasized not only for educational background but also for personality.

3. The Future of Hospital Administration, by *S. S. Goldwater, M.D.**

IN the development of social institutions, the influence of environment, the traditions of the past, and the ideals and will of the current generation of thinkers and doers are factors in shaping the future. All of these forces come into general play, but the future of any given hospital is not beyond the control of its local administrator; he plays a considerable part in shaping and directing his institution; his personality is a major condition of its environment. Change is the tenor and tendency of our society today, and individuals—among them vigorous and imaginative hospital administrators—will determine what social and institutional forms are best for mankind and what therefore will or should survive.

If you were asked what you considered the most important single quality in a hospital administrator, what would you say? If this question were put to me I would answer sympathy, or compassion. Not the emotional type of compassion which gives way to tears and ends in helpless despair, but the kind which arouses action, which intuitively grasps the meaning of a critical situation, which senses the need of appeasement, and eventually does something. This type of compassion, frequently observed among the members of the College of Hospital Administrators, is being imparted by the College to the hospitals of the nation. The future will see a widening of its beneficent influence to the extent that men of good will can be enrolled in the ranks of administrators.

It would be hazardous to attempt to predict the future of a conspicuous social institution when, as I have said, the shaping of that future lies in the hands of youth. It is particularly hazardous in the hospital field because of the present turmoil, with its surprises, demands, and almost daily upsets that defy logical analysis or prediction. But there are certain resources in your hands, the utilization of which will surely have some effect in bringing about those developments in hospitals in which most of you believe.

As a result of various statements that have been made, there has been spread among the laity the feeling that hospital administrators are seeking to control medical practice, that there is a vital issue which cries out for settlement between the medical profession and hospital administrators. In my opinion no such conflict of interest exists. Nor can there be any such conflict because we realize that our function is to serve the sick, and that in order to serve the sick we must serve the medical profession. Hospital policies and programs are

* Adapted from *Hospitals* 12:15-22, Nov. 1938.

efforts to adapt administrative means and physical resources to medical ends, thus making it possible for the sick to be better cared for.

In general terms we seek to care for the sick, and since we take our jobs seriously we are eager to see our hospitals equipped with the best means for accomplishing so exalted a task. We are called upon to discover, classify, and apply the required technical means. As science advances and medicine becomes more complex, as the requirements of the medical profession grow in number and detail, it is for us to remember that although we have in the past done all we believed to be possible, we must remain alert, must continue to recognize changes promptly, and must adapt hospital organization and equipment to meet advancing needs. The ablest administrators foresee needed changes and facilitate them; the wise administrator is never satisfied; the administrator who is sure that his hospital is perfect is one whom I would advise to withdraw from the field. Let us banish forever the vice of complacency.

It is customary to say that the three particular objects or purposes of hospitals are medical care of the patient, teaching, and research. These three are different angles of the problem of efficient medical care. The prevention of sickness is a conceivable fourth, but this is an idea which has logical limits as far as hospital administration is concerned.

It would be a mistake for hospital administrators to attempt to take over from public health authorities preventive medicine in the full sense of the term, although what nowadays is regarded as proper therapeutic care includes an inseparable ingredient of prevention. When we send follow-up nurses or social workers to find out what has happened to a discharged patient, to educate the patient in health habits, and to guard against a recurrence or aggravation of disease or disability, we are practicing medical prevention. When we keep accurate and adequate records and deduce from them we are practicing prevention. Many of the traditional services of the out-patient department are preventive, arresting disease in its incipency. These examples of legitimate hospital activities with a preventive slant could be multiplied indefinitely.

Curative medicine, then, has a very definite preventive aspect, but a distinction remains between preventive medicine, or public health administration as such, and the practice of medicine. I believe it is because some of those who are engaged in public health administration are lacking in imaginative power or in resourcefulness in their proper field, that we sometimes find preventive medicine relatively neglected by public health departments and hospital clinics needlessly duplicated by them. Aiming to expand rather than to perfect their work, they reach out into neighboring fields, creating confusion in public administration. We find public health officials who are willing to step aside from the classic routine of their job, from attempts to improve the quality of human life by the modification of environmental factors, in order to engage in activities which really belong to the hospital.

For the encroachment of public health administration on therapeutic territory the excuse is offered that hospitals are not fulfilling their function, and the criticism is not without foundation. We as administrators must try to make our job of personal medical care a

complete job. We must see to it that our service to the sick is properly implemented by a comprehensive program, satisfying all the reasonable demands of modern medical practice. There must be no gaps in clinical coordination, in laboratory service, in diagnostic aids, in convalescent care, in follow-up work, in medical social service, in the protection of the health of hospital workers. There must be close cooperation with public health departments and with voluntary social and health agencies.

The interest of most hospital superintendents, in the old days, was centered on the physical hospital. Considering my own experience and interest in the planning of hospitals, I should perhaps be the last one to decry the importance of the physical hospital plant. But actually the physical hospital is secondary in importance to the living hospital, the live, functional hospital whose activities determine what finally happens to the patient. I have seen excellent hospital work done in miserable physical surroundings. Then, too, I have seen the exact opposite, hospital work of the poorest kind done in the most luxurious surroundings. Let us see to it that our communities provide the best that is possible in the way of physical surroundings for our patients, but may we never be carried away by the thought that a hospital which has achieved physical beauty, which has been built securely and has been furnished in good taste, is a finished hospital. At that point the scene has been set, but the play has not yet begun. We all know how easy it is to manage a hospital during its period of construction. Hospital administration is put to the test only when the hospital plant is finished and the first patient arrives. When a thousand patients have been discharged it is time to begin stock-taking, to look for errors of omission and commission, to correct mistakes.

Some hospital administrators regard themselves primarily as businessmen or glorified hotel managers. Hospital administrators of this type have often come to me to ask for assistance in promoting their careers, and have presented as evidence of administrative ability a hospital report showing a balanced budget. A balanced hospital budget may be something to be proud of or it may be a callous testimonial of unfelt shame. If a balanced budget has been attained through the heartless sacrifice of adequate medical care, if it has been effected by disregarding the patients' best interests, it is worse than an unbalanced budget unavoidably resulting from an honest effort to supply genuine needs. On the other hand, if the budget of the hospital has been unbalanced through the misappropriation or the careless administration of hospital funds, the lack of balance is indefensible. There must be a proper relation between income and expense if the administrator is to succeed as an administrator, but his first duty is to consider the service that is needed. The hospital administrator who administers his hospital in the best interests of the patient, the administrator who can demonstrate that in both quantity and quality of service his hospital is beyond reproach, may well take pride in his achievement.

Our primary function, I repeat, is to adapt the hospital to its patients, and there are two kinds of adaptation to be considered, social-economic and medical. Believing that rich and poor alike should have adequate medical attention, we have developed two types of hospitals to care for them, namely, the voluntary hospital and the municipal hospital.

Government hospital service tends to increase abnormally because of existing economic conditions. Government hospitals are expanding at an unprecedented rate. I would like to see this tendency checked by the vigorous use of every available means for preserving and developing voluntary hospitals. The compassion that is in the hearts of all rich men, if we can get to them, will do much to further this end and we must not concede that the era of giving to hospitals has passed. Association with a voluntary hospital should be made a matter of pride. We should do all in our power to administer our hospitals in the most efficient way; if voluntary hospitals can keep alive the traditional belief in the superior quality of their service, the public will not permit them to languish.

Voluntary hospitals report quite generally a state of financial decline due to diminishing income from paying patients and from donations for the maintenance of free beds. I believe that the tendency toward financial decline can be checked by a revival of interest and faith, and actually reversed by the more active exploitation of group insurance plans. Group hospitalization, if fully expanded, will enable many millions collectively to pay hospital bills which they cannot pay individually; group hospitalization should therefore aid in the preservation of the voluntary hospital by stabilizing its finances. It merits your best thought and effort. It has, I believe, a brilliant future.

To the layman it might appear that when a reputable professional organization lays down a set of standards for the guidance of medical administrators, the last word concerning hospital efficiency has been spoken. But such official standards, while helpful, are only guides for proper administration; the real work of the resourceful administrator lies beyond and above the plane of standardization. The definitions that standardizers use are derivative, they are deduced from a reasonable average of professional and administrative practice, and they are overshadowed by the outstanding attainments of hospital leaders. Standardization is based on past performance, not on the hopes and ideals of the future. As medical science progresses, new hospital needs are revealed, and official standards automatically drop below the level of achievement for which the progressive administrator strives. The number of current articles advocating advanced administration is reassuring evidence of the large amount of critical study that is going into hospital administration to-day. It is to the credit of the College that in the vast current literary output on hospital topics, the contributions of its members hold a conspicuous place.

One of the functions of the hospital is education, but education is not to be considered the function of the university hospital alone. The university hospital is concerned with a specialized type of education. In the hospital of the future, education will be a pervasive principle, not a restricted incidental function, and its influence will be felt by intern, nurse, dietitian, technician, social worker, and administrative assistant.

It may be assumed that, through registration, classification, and standardization, the great national medical organizations, the American Medical Association and the American College of Surgeons, will continue to enlighten hospitals concerning fundamental professional needs. Three other great institutions are available for our use today: first, the hospital itself, our workshop and administrative laboratory, the principal source of our ideas,

an inexhaustible field for observation and study; second, the American Hospital Association, a great forum for the exchange of institutional experiences; and, third, your own American College of Hospital Administrators, prepared to contribute to the moral and mental health and the welfare of its members, to help them keep their sacred pledge to society, to encourage them to strive for their own better education, and thus to perfect the service of the hospital to the sick.

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CHAPTER VI. MEDICAL STAFF ORGANIZATION AND RELATIONSHIPS

1. Selecting and Organizing the Medical Staff, *by A. C. Bachmeyer, M.D.**

THE modern hospital is a complex organization consisting of a number of highly specialized units, each having its own functions to perform and each requiring the services of skilled and specially trained personnel. Its development during the past several decades has been in large measure the result of the numerous advances made in the field of medicine and in the allied physical, biologic, and social sciences. These many discoveries and improvements, the introduction of intricate laboratory analyses and of precise methods in diagnosis, the need for special equipment and involved procedures in therapy, have made it impossible for the individual physician to render adequate, competent, and complete service in the case of serious or puzzling illness. All of these developments are only auxiliaries which the physician may call upon when the need arises. Though the hospital has become the sole agency in the community through which complete medical service is available at all times, the physician remains and always will be the paramount factor in the care of the patient. As such, he is the most important element in the entire hospital.

The finest and most modern equipment, the most highly trained and efficient personnel, are valueless in the absence of the professional counsel and direction of the physician or surgeon. The individual physician is no longer self-sufficient in the practice of his profession and must of necessity call upon his associates who are possessed of special skill and knowledge, and upon the services of other highly trained technicians. And as it is the function of the hospital to provide the means whereby proper facilities are made available for adequate medical service in all instances, it is obvious that there must be a coordinated group of medical practitioners associated with every hospital. In order that such a group may function in the most efficient manner in the interests of the sick and injured, it should contain representatives of the various special fields in medicine and be so organized that their services may be readily obtained and that their counsel and assistance may be available to the authorities in charge of the institution.

Earnest consideration should be given to the selection and organization of the physicians, surgeons, and specialists who are to form the medical staff and who are to use the hospital's facilities in their professional practice. One rarely hears a patient speak of "my hospital" but the expression "my doctor" is familiar. For this reason, because of the reputation that its medical staff earns for the hospital, the greatest care should be exercised in the selection of its members.

Much might be written of the methods of selection that have been employed. In recent years, particularly in the smaller communities, the local medical society has been helpful in

* Adapted from *Mod. Hosp.* 42:59-62, Apr. 1934.

many instances. In larger cities groups of physicians have interested themselves in the establishment of hospitals and have served as the nuclei about which the staffs have been formed. No single method of approach to the problem will be applicable in all instances. Local conditions should be carefully studied for they will usually govern the procedure. The most important factor, however, is that the men selected shall be the best obtainable in the community.

A number of national societies, representing the various medical and surgical specialties, have developed regulations and have established examining boards whereby those who are competent may qualify for recognition in their special field. Every hospital should strive to have on its staff, at least among the senior members, those who have thus qualified in the specialties they practice.

The governing body—board of managers, trustees, or directors—having final authority over and responsibility for the entire institution should in all instances appoint the members of the medical staff. The board should, however, have the advice and counsel of the staff concerning all staff appointments and the admission of all professional men to practice in the hospital.

The fundamental functions of the medical staff may be listed as follows.

1. The provision and control of professional service in the hospital.
2. The maintenance of proper standards of medical and surgical service so as to give assurance that all patients will receive adequate, competent care and treatment and that the best possible technique will be used in carrying out the diagnostic and therapeutic measures prescribed.
3. The analysis of the results of the medical and surgical work, so as to provide a check upon the performance of all those directly engaged in caring for the patients.
4. The development of regulations pertaining to the granting of medical charity.
5. The conduct of educational activities for the younger members of the staff, the interns, the nurses, and the patients.
6. The initiation, support, and supervision of investigative studies in clinical problems, and research in such other fields as may be undertaken with the facilities available.
7. The formulation of group opinion on professional subjects and of requirements for proper professional service.
8. The giving of advice to the hospital management upon any subject in the interest of the patients or the institution.

A definite constitution with such by-laws and regulations as may be necessary should be adopted for the guidance of the staff in each institution. The staff should write its own constitution, subject to the final approval of the governing board of the hospital. This constitution should definitely provide for the form of staff organization by prescribing: (1) the method of selection, appointment, advancement, or promotion in rank, and tenure of appointment for all staff members; (2) the method of selection, title, and tenure of service for all officers, specifying also their duties and responsibilities; (3) the method of selection,

size, and function of all regular standing committees and the formation of special committees when required; (4) the various grades of membership and the duties and privileges of each.

No uniform plan of organization will be applicable in all instances. Much will depend upon the size of the institution and its functions. In the more common schemes of organization the chief medical officer is designated as chairman, dean, president, or chief of staff. There are usually a vice-chairman and a vice-dean. Provision is also made for a secretary. In an increasing number of instances the superintendent of the hospital is being designated as the secretary of the staff. As such he serves as the liaison officer between the staff and the board of management.

In order that there may be orderly arrangement, recognition of ability and service, extension or restriction of privileges, and proper disposition of duties, it is necessary that there be various grades of membership. There is little uniformity in American hospitals in the use of the various designations whereby staff rank is denoted. The designations used most frequently are: chief or director of service, associate or assistant chief or director of service, attending or senior attending (visiting) physician or surgeon, associate attending (visiting) physician or surgeon, assistant or junior attending (visiting) physician or surgeon.

Such titles as consulting or emeritus physician or surgeon are usually conferred as an honor and in recognition of years of service upon members who retire from active duty on the staff. In many instances the constitution or by-laws makes provision for retirement of members from the active staff upon the attainment of a certain age. The age limits usually encountered range between sixty-two and seventy years. Appointment as consulting or emeritus does not deprive the one thus honored of the privilege of practice in the institution. Such men often continue to serve as counselors to both the active staff and the governing board.

The number of staff committees will vary according to the size of staff and hospital and the functions performed. An executive committee is found in almost every staff organization. It is usually composed of the officers and one or two additional members of the staff. Ordinarily this committee transacts staff business in the interim between meetings and on occasions meets with the board of management to discuss professional policies or transmit staff suggestions or requests. Its members usually are appointed to serve in such manner that there is not a complete change in personnel each year, thus ensuring a certain continuity of staff policy.

A board of censors or professional committee is often found. It is usually composed of senior staff members representing the major medical and surgical specialties. This committee passes upon the qualifications of members of the profession seeking to be admitted to practice in the hospital or applying for membership on the staff. It also serves to investigate questions of medical ethics and professional conduct and complaints involving staff members. Unless so empowered by the board of management, its findings and recommendations are submitted to the staff and ultimately to the board for final action.

A committee on medical records is usually established. It is the duty of this committee to supervise the work of the medical record department of the hospital, to review the records of the patients, and to present an analysis of the medical and surgical work to the staff with comments, criticisms, and recommendations. Its members must be chosen from those members of the staff who are entirely above suspicion, who are fearless, frank, and just, for it may fall to them to call to account any member of the staff whose practice does not conform to the highest professional standards.

Numerous other committees are encountered in staff organizations. Among them may be noted the following: committee on staff meeting programs, interdepartmental relations, interns, nursing school, medical library, laboratory service, special therapy.

The well-organized staff, officered by alert, enthusiastic, interested men, in which duties are assigned through active committees to a large number of members, will always be of greatest value to the institution.

The departmentalization of the professional service in the hospital will depend in large part upon the type and size of the institution, its organization, and its relation to other medical and social activities. In some hospitals, all the medical specialties will be grouped under "Medicine," surgical specialties under "Surgery," and the laboratory services under "Laboratory." In others, each specialty will be recognized as a separate service or division, so that there may be as many as twenty or more clinical and laboratory divisions.

The separation of specialties and clinical services should be carefully studied and arranged so that staff members will readily confine their activities to those divisions or special services to which they are appointed. Too great a departmentalization may work a hardship upon them or their patients or be of distinct disadvantage to the hospital. Having determined upon this phase of its organization, however, the staff should require its members to abide by the regulations. Surgeons should not be permitted to attend purely medical cases, obstetricians should be restricted to the practice of obstetrics, internists should not be permitted to perform surgical procedures, and the various specialists should be required to confine their practice to their special fields.

The assignment of patients to the various services should be precisely prescribed in the staff regulations. The admission of patients usually falls to a member of the resident or intern staff and he should be required to follow the definitely prescribed regulations and cautioned not to make exceptions for any member of the staff. Such regulation should also prescribe the procedure to be followed in the admission and assignment of patients brought to the hospital in emergency or otherwise who have no regular physician and who express no preference as to their medical attendant. This is often a difficult problem and the source of discord among staff members. Obviously these regulations require careful consideration so as to assure justice to all concerned, particularly the patient. Favoritism and special privilege in this connection are fraught with grave danger to the equanimity and morale of the medical staff and consequently to the hospital.

The members of the staff must also recognize the fact that while the hospital is primarily operated as a service institution for the sick and injured, it also has educational

functions to perform. Definite provisions should be made in their organizations to assure their participation in these responsibilities. Arrangements should be made that will assure the younger members of the staff ample opportunity to profit by experience and to broaden their professional knowledge. Definite provisions should likewise be made for educational opportunities for the recent graduate or intern. Participation in the teaching of student nurses is also a responsibility that the staff should recognize and should assign to properly qualified individuals.

Staff organizations are classified as open and as closed or restricted. In the open staff, physicians and surgeons who do not hold definite staff appointments are admitted to practice in the hospital. Frequently they are designated as members of the associate or courtesy staff. In the closed staff, only physicians and surgeons who hold regular staff appointments may serve patients in the hospital. Both types of organization are generally recognized and both have their place in hospitals. There are advantages and disadvantages in both forms of organization. Local conditions usually will indicate which type of organization is most desirable.

The control of the courtesy staff, or of those physicians admitted to practice in the hospital but not regularly appointed to the staff, is often difficult. Definite regulations should be adopted prescribing the method of their admission to practice in the hospital, the extension or restriction of privileges to them, and the types of patients whom they may serve. It should be required of them that they apply for definite privileges, such as the permission to serve private patients who require only the services of an internist, obstetrician, surgeon, or particular specialist. Their application should be submitted to the proper committee of the organized staff for investigation and report. The applicant should be required to demonstrate his skill before this committee. His services should then be restricted to the professional activities the staff judges him competent to perform. The committee's findings and recommendations, as accepted or modified by the regular staff, should be transmitted to the board of management for final action. The board should communicate its decision to the applicant. If granted the privilege of practicing in the hospital, complete instructions concerning the privileges granted and the responsibilities the doctor thus assumes should be sent in writing or as published to the applicant, so that there may be no misunderstanding of the provisions of the agreement.

Policies governing professional service and the functions the institution is to perform should in the final analysis be determined and prescribed by the governing board of the hospital. Such policies and the regulations whereby they may be executed should be clearly stated and published. The governing board should not, however, endeavor to establish them without first consulting the medical staff as to their content. Each member of the staff and every physician admitted to practice in the institution should be fully informed of such policies and regulations. If they accept them it is then incumbent upon them to observe and support them in practice. If they find themselves unwilling to abide by them it is incumbent upon them to say so and to sever their connection with the hospital.

Physicians are often tempted by influential patients or their friends or relatives to secure

admission for patients who are excluded from the hospital by regulation. This is often the case in the instance of patients who are noisy, demented, epileptic, or senile or who have chronic or communicable diseases. In strict compliance with the regulations and in fairness to the hospital, the physician should frankly discuss the situation with those concerned and should not endeavor to evade his responsibility.

The hospital should keep its staff members fully informed concerning its financial status and its policies, practices, and regulations concerning charges for service and collection of accounts. They will then be able to inform their patients concerning these factors of their hospitalization.

Every endeavor should be made to provide for as democratic an organization of the staff as possible. Wealth, social position, influence, aggressiveness, personality, or professional skill should not win for any staff member special favors or unusual privileges. Each applicant for appointment should be required to conform to the same procedure. Definite regulations pertaining to advancement in staff rank should be prescribed and followed. While length of service should be given consideration in promoting a staff member from one grade to another, it should not be overvalued and should not be the sole criterion. Advancement should always be made upon the basis of merit, not upon the basis of size of practice, popularity, number of patients brought to the hospital, or any other single factor.

In recent years, when hospitals have been confronted with grave financial difficulties, some governing boards have assumed unwise attitudes toward their medical staffs. They have urged physicians and surgeons to send more patients to the hospital and to advise hospitalization whenever possible. They have granted additional privileges and have shown favoritism to the staff members who had the largest practices; they have sent reports to staff members and associated physicians showing the number of patients each has referred to the hospital and the income accruing to the hospital through their patients. These are all dangerous practices which eventually will lead to disastrous consequences. Such methods quickly destroy the morale of the staff, lessen the loyalty of its members to the hospital, undermine ethical standards, and in the end result in loss to the institution. The members of the staff should not be regarded as business getters or sales agents for the hospital under any circumstances.

Another practice that should be condemned is the ready offer of a staff appointment to busy practitioners who are members of other hospital staffs in the hope that they will divert some of their patients because of such appointment. This creates unfair competition between hospitals and breeds bad feeling. Multiplicity of staff appointments interferes with undivided loyalty to any single institution and makes impossible the giving of proper attention to his responsibilities by any staff member in any of the hospitals with which he is connected. In most communities there are enough competent physicians so that multiple staff appointments are not necessary. If multiple appointments were entirely eliminated, both the profession and the hospitals would benefit. This is especially true in connection with open hospitals, where staff appointments are not essential for practicing in the institution.

2. Staff Relationships that Focus Service on the Patient, *by E. M. Bluestone, M.D.**

THE relationship between the members of the medical staff and the administration of the hospital can best be developed when it is based on the relationship of these groups to the patient in whose interest the hospital has its reason for existence. To the casual student of hospital organization this remark may seem hackneyed and may perhaps indicate too much solicitude, but to those who know or would examine deeply into the functioning of the modern hospital, the fate of the patient is of sufficient concern to call for a policy of eternal vigilance during the organization of hospital relationships and their subsequent adjustment. I shall begin, therefore, by stating that the governing body (variously referred to as the board of trustees, the most descriptive name of all, of directors, of managers, or of guardians), the administrator, and the medical staff, and all others in the hospital whose relationships must be considered in the scheme of organization, have a primary obligation to the patient which must be dominant in all their activities and must serve as the touchstone for the entire plan of hospital organization. The relative position of these three groups to each other will be clear if we plan it according to the relation of each of them to the patient.

Members of the governing board, who are the prime movers of the enterprise, are responsible for the creation and maintenance of the hospital. They are among the representatives of the health and medical interests of the community, and their trusteeship makes them responsible to the community for the humane conduct of the institution. Presumably a need existed which they, as public-spirited and philanthropically minded citizens, undertook to fill. The hospital idea having come into existence, they appointed an administrator to represent them in their negotiations within the hospital. This governing board becomes in actual practice the court of appeal for all matters that are of an executive, judicial, or legislative nature, subject only to certain public health laws that prevail in the community and to "a decent respect for the opinions of mankind." Under these circumstances the trustee must be considered primarily as a social worker whose interests are specialized in behalf of the sick. The administrator, too, whether he is a physician or a layman, is a social worker with business functions rather than a business manager with incidental social functions. The proper point of view is important and should be established at the outset.

The medical staff, with its complement of specialists and consultants for diagnosis and therapy, has a specialized task which also carries a cooperative responsibility, for there is social service to be rendered besides purely medical service. In fact medical service, historically viewed, is a specialized form of social service. Under the medical staff and subject to its instructions are such divisions as the house staff and the nursing staff, which need not be considered separately for the purposes of organization. The patient is the individual on whom all service is focused. He is the social entity without whom our three groups would have no reason for existence.

Having now defined our terms, let us see how we can best adjust the relationships in or-

* Adapted from *Mod. Hosp.* 36:83-86, June 1931.

der to accomplish the greatest good for the sick. To begin with, we must make up our minds about fundamentals in the matter of policies, rules, and regulations. How shall we plan for the individual patient in his relation to these groups? Shall we, for example, make the rule to fit the needs of the patient, considering him as an individual, or make the patient conform to the rule, considering the interests of the group only? In the hospital we do not often deal with situations that fit into a universal pattern. Hospital relationships with the patient must in fact be adjusted to situations that are for the greatest part unprecedented. To state questions like these is to answer them, if the fundamental purpose of the hospital is borne in mind. Decisions rest fortunately with the governing board, for in this body there are no axes to grind and here singleness of purpose has its greatest opportunity.

In this connection another question requires an answer: Shall we fit the plan to the personnel obtainable or the obtainable personnel to the plan? Flexibility should be provided for to guarantee the adjustment of relationships to changing circumstances. It is only fair to say that during the last decade considerable advance has been made in organizational problems, particularly in the larger hospitals where the danger of mechanizing the service to the patient is greatest.

While the three groups which we are considering—the governing board, the administrator, and the medical staff—in their relation to the patient should be guided only by the welfare of the sick, in actual practice there are exigencies that are permitted to modify and color this attitude. One example that was given above is the relation of the individual to the group in hospital practice. Another is the financial relationship between the patient and the hospital and between the patient and the physician. Where is the happy relationship that will bring the greatest good to the greatest number? A proper spirit in the hospital means a contented patient in so far as this can be effected in those who are physically ill. One of the most satisfying visits that I have ever made to a hospital occurred several years ago when I visited the British Ophthalmic Hospital, Jerusalem, an institution that made no charge for service to patients either in the wards or in the out-patient department. In other words, it did not fine the patient for seeking relief as we do in more civilized parts of the world, where the social machinery for effecting this purpose is somewhat elaborate. Happy is the hospital organization where the financial factor has been reduced to a minimum.

The governing body has for one of its most important functions the selection of an adequate and competent staff. This happens to be one of the moral obligations of the hospital that is also a legal obligation, for the hospital, as a charitable institution, is open to legal suit for malpractice in those cases where proper care has not been exercised in the selection of the staff. As will be pointed out later, the governing body, in the matter of selection, would do well to seek counsel from its medical board as well as from the medical profession at large beyond the walls of the hospital. Whether the hospital should be open to the medical public to assume responsibility for the care of patients or closed except to a selected and highly qualified few is a question for the governing body to decide. But whatever the decision, it must be based on the interests of the patient, which must be supreme, rather

than on the personal interests of those selected to serve him. So it is with the staff after appointment. The legal obligation has now disappeared but the moral obligation persists. The duty of the board does not cease with the process of selection, for the members of the staff should be required by their conduct to prove their right to retain favored positions. This means a positive attitude toward the patient in accordance with the fundamental purposes of the hospital. The medical staff inside a hospital, at least, should maintain the highest type of ethical as well as scientific medical practice and thus light the way. The point of this remark will be obvious in a medical world that lacks an adjusted social program and has become somewhat demoralized by commercial influences and pseudoscientific competition.

Following the appointment of an adequate and competent staff the board is called upon to provide facilities and equipment, another problem in philanthropy. Physicians serving in hospitals are often entitled to much more than they receive for their work. But this presumably is a matter for negotiation, in which again the interests of the patient should prevail.

In the larger question of facilities another problem arises, namely, the current practice of limiting the stay of the patient in the wards or out-patient department according to the duration of his illness. The chronic, the so-called incurable, and the aged are forgotten. In planning for the adequate care of the sick, how many members of the medical staff stop to consider that the right to prescribe involves the obligation to follow up, that the scientific and humane care of the patient (synonymous terms which I am using only to emphasize my meaning) requires that he be kept under observation till the natural history of his illness has run its course? Here is a problem in hospital relationships that is a standing challenge to the student of hospital organization.

In its relation to the governing body the medical staff is responsible for related medical service to the patient (special diagnosis and therapy) as well as for direct medical service. In addition it has a cooperative function that has special meaning in an institution for the sick which draws on a variety of services for its existence. Furthermore, the fundamental functions of the hospital in the realm of (a) preventive medicine, (b) curative medicine, (c) medical education, and (d) medical research are largely in the hands of the medical staff acting with the support of the board. How to strike a proper balance in these four important functions is a problem in hospital organization that can be solved in individual instances by these two groups acting in harmony in accordance with the principles that we have described. The popular and in many respects the best method of conducting such negotiations is through a conference committee composed of the executive officers of the governing board on the one hand, and the executive officers of the medical board on the other.

One can enumerate many instances that require fine adjustment in the relationship between the medical staff and the governing board, but the interest of the patient as a criterion is the best guide in organization. If the governing board has determined its fundamental policy in this respect, the problem of organization is thereafter simplified. One must

remember that the social and medical exploitation of the ward (charity) patient in our age is made easy because of his poverty and the weakness of his protest and that this matter requires the constant vigilance of those who plan for his care. He is too often considered public property, whereas adequate medical service is his right and privilege as a self-respecting member of the community.

In its relations with the medical staff the board must also consider its relations to physicians outside the hospital, the general practitioner in his organized and unorganized form. No hospital can successfully isolate itself from the medical world without, any more than it can successfully isolate itself from the social world, for the hospital must have the good will of the community, including the medical community, to ensure its existence. Whatever the internal relationships of the hospital, the practitioner has a definite place in the clinical biography of any patient who is subsequently transferred to the medical staff of the hospital. The more fortunate member of the hospital staff cannot afford to overlook the general practitioner who saw the patient during the earlier stages of his illness. It has been pointed out above, in a general way, that the hospital has an educational obligation. This should include the general practitioner, if we would prevent the establishment of a vicious circle in which the practitioner, disregarded, is deprived of the stimulus to a higher medical education and as a result becomes more and more out of favor with his more fortunate colleagues within the hospital.

Another group that must be seriously considered in the plan of organization, though it is a part of the medical staff as indicated above, is the resident staff, who should be ready at all times to serve the best interests of the patient and toward whom there is an obligation to teach good social and medical habits in the treatment of the sick. From the point of view of relationships, the members of the resident staff should be fully responsible to their seniors for all work that is of medical nature and to the office of the director for matters of an administrative nature. Personal interest on the part of the board in the future of the younger generation of doctors has its rewards. Under the general heading of physicians one might also include undergraduate students, if the hospital is affiliated with a university, and postgraduate students, whether or not it is so affiliated. Here, too, the problem is primarily educational and no medical teacher will question the need for protecting the rights of the patient when he is used for educational purposes. In the student groups there must of course be give and take, but the proportion should depend on the needs of the patient, whose care comes before education and research, which are indeed by-products, however important.

In its relation to the medical staff the board must deal with individuals and groups in their organized and unorganized form. In the scheme of organization this problem is readily solved by considering the medical board, presumably constituted of the senior members of the attending staff, as the advisory body to the governing board in all matters medical, and the governing board is wise that is willing to accept such advice in its conduct of the medical affairs of the hospital. In doubtful cases recourse may naturally be had to

public medical opinion outside the hospital, but this should not be sought without the best of reasons. A typical instance would be one in which the interests of the patient and the personal interests of the staff seem to conflict. The medical staff should be made to feel that it is engaged in a cooperative enterprise and is partner to all hospital activities. I do not doubt that the most fruitful sources of difficulty will be found in the variance that unfortunately exists between the professional and the economic interests of the physician. This must be taken into account in considering relationships under the scheme of medical organization.

The question as to whether the medical staff is to serve on a full-time (paid) or part-time (voluntary) basis is a communal problem which extends beyond the boundaries of the individual hospital but which may be individually adjusted by the governing board, depending on the need and the available funds. In its final analysis the decision depends on the economic environment in which the hospital is cast. Public health is indeed purchasable within reasonable limits. But regardless of the reward that the hospital may be able to give the physician financially, in practical opportunity, in prestige, or in all of these, the relationships remain unchanged and the individual members of the medical staff are looked upon as men of science on whom the hospital must depend for its most important function of all, the humane care of the patient.

Up to this point I have tried to give a few random thoughts on the subject of the relationship between the governing board and the medical staff on the one hand and the patient on the other. An important position in the scheme of hospital organization and in a practical sense the key position in the study of relationships is the office of the director (administrator, superintendent, secretary, or medical director). The director of the hospital, besides being the administrator, is the coordinator of all hospital activities, varied as they are. He is the liaison officer between the governing board on the one hand and the staff and the patients on the other, in all matters that affect the conduct of the hospital. He interprets the staff and the patients to the trustees at the meetings of the board if he attends them, or, if he does not attend them, to the executive officers and the trustees individually. At the meetings of the medical board he has the opportunity of interpreting the board to the medical staff; if he does not attend these meetings, he interprets the board and its wishes to the individual members of the staff.

If these tasks are performed honestly and in the interests of the patient primarily, the administrator reaches the point of maximum usefulness. Since the social point of view must prevail, business management is secondary, though important, and the wise administrator knows how to assemble a group of expert heads of administrative departments to advise him in the same manner that he is advised by physicians in medical matters. The conception of the director's office as a clearing house for all hospital activity provides practical interrelationships, when the administrator is competent to act and is willing to be impartial in his dealings. Centralization of this kind in the modern hospital is essential and should be provided for in the scheme of organization, if for no other reason than to prevent

confusion and duplication of effort. If the administrator is himself a physician, so much the better, but the important factor is not so much his clinical knowledge as his social spirit and understanding.

There is reason for disappointment over the failure of our medical schools to place more emphasis on social medicine and on the opportunities for social work and medical organization that hospital administration offers. Training for such work is preferably by the apprenticeship method with proper academic support. The study of medical organization and administration, which are such an important part of medical practice, should not be left to chance factors, and a greater effort should be made by organizations like the American College of Surgeons, with its hospital standardization conference, to train and to hold a competent group of administrators who will round out the proper relationship between the trustees, the staff, and the patient.

3. Function of the Hospital in the Training of Interns and Residents, *by J. A. Curran, M.D.**

MODERN medical education requires a comprehensive program covering the entire professional life of the physician. To be effective, each step must be planned for the years as medical student, as resident staff member, and in practice. Viewed in this light, the internship and residency seem pivotal in the whole scheme of things. Certainly to an extent equal to the four years in medical school, the hospital service plays a vital part in conditioning the young physician in methods of approach to his patient's problem, in modes of treatment, and in general ideals of practice. It has become increasingly apparent to medical educators, however, that the training furnished house staffs is often not as effective as it might be. Disquieting reports drift back to the medical alma mater, dissatisfactions are voiced by hospital intern committees with the type of preparation their candidates have received, and intern groups themselves have become increasingly conscious of essential elements missing from their training.

The whole question is one of such complexity, with so many intricate factors woven into its fabric, that it has been extremely difficult to know where to make a beginning. Medical colleges have repeatedly carried out searching self-criticism of their methods and accomplishments, which have resulted in great improvement in the quality of their graduates. It is logical, therefore, that the next step should be a similar critical analysis of medical education as it is applied during hospital residence. During this period, the value of college teaching is put to the test and it is needful for medical faculties to extend their interest and knowledge definitely into the intern years. The Council on Medical Education and Hospitals has presented the problem squarely, has made hospitals realize that minimum standards exist, and has been a far-reaching stimulus for improvement.

The five boroughs of New York City present peculiar advantages for initiating a cooperative medical college-hospital survey. In this compact and densely populated area are

* Adapted from *J.A.M.A.* 106:753-756, Mar. 7, 1936.

found seventy-nine general and special hospitals approved by the American Medical Association at the present time. Their house staffs total more than 1,600 individuals, representing approximately one-sixth of the number in the United States. When additional groups serving in unapproved hospitals and suburban areas are included, the total will approach 2,000. All types of experience are among the opportunities offered. As a result of the many openings available, graduates of about 90 per cent of American medical colleges, as well as large numbers of Canadian and European schools, are represented. A preliminary study of one-half of the group revealed the fact that 55 per cent were graduates of other than the five medical colleges of New York City.

For some years the Committee on Medical Education of the New York Academy of Medicine and the deans of Columbia, Cornell, Long Island, New York Homeopathic, and New York University medical colleges have been carrying on independent studies of internships and residencies in local hospitals. Finally in 1934 a joint committee was organized and through a substantial grant from the Commonwealth Fund a two-year project for careful examination of every hospital in the metropolitan area was made possible. This plan included visits to neighboring medical centers also. The investigation is still in progress and its conclusions will not be completely available until some time after July 1 of this year.¹ Needless to say, the work would not be possible without the cordial cooperation of the hospitals involved, and this has been freely given. They have also furnished representatives for service on the subcommittees dealing with different phases of the general problem. The results of the survey are made available to each hospital for its information and guidance. These informal follow-up reports have resulted in frequent beneficial changes in the house staff situation.

To sum up the plans of the committee in general terms, its objectives may be outlined as follows:

1. A systematic and thorough study of internship and residency training as applied in a large, representative area.
2. Through information thus received, to clarify our minds as to what place the house staff experience should have in the general plan of medical education.
3. To arrive at some evaluation of the methods now in use, designed to qualify the physician for different types of practice.
4. To supply educational institutions and hospitals with adequate data vital to their individual needs.
5. To act as a clearing house of information through which the schools and hospitals may benefit from the experience of others.

The knowledge obtained in one and a half years of effort makes us hopeful that these objectives are obtainable and that a great deal of constructive work will be done.

Perhaps the simplest method of approach is to chart the progress of the intern from the beginning of his service, asking ourselves a series of questions along qualitative lines:

¹ The results of this investigation were published in *Internships and residencies in New York City, 1934-1937; their place in medical education*, New York, Commonwealth Fund, 1938.—Editors.

1. Is introduction to medical duties and responsibilities systematically provided?
2. On beginning his duties in the emergency room and on the ambulance, is instruction given in minor surgical technics and first aid?
3. Is attention paid to adequate grounding in such ward technics as dressings, spinal punctures, clyses, venipunctures, and examination of body orifices, or must the intern learn them by practicing on the patient?
4. Are nursing procedures outlined and demonstrated to the intern so he may appreciate and supervise them properly?
5. Is he introduced to the operating and delivery rooms with the same care as a pupil nurse?
6. At the bedside, are his observations given serious attention at the time of regular rounds?
7. Is an outline for keeping medical records taught?
8. Is there a tradition for the intern to summarize his observations and present them effectively both at rounds and at the regular departmental conferences?
9. Are laboratory tests carried out as meticulously as in medical school, and are they performed in connection with study of an individual patient?
10. Is reading of medical literature stimulated?
11. Does an appreciation exist of the patient as an individual and of the importance of social, psychologic, and spiritual factors in health and disease?
12. Do the members of the attending staff comprehend their responsibilities as preceptors and take a personal interest in the objectives of each intern entrusted to their care?
13. Is a method for systematic appraisal of the intern's work carried out?

Another mode of approach is to trace the contact of the intern with the patient throughout the latter's hospital experience. Osler once said that the only way to learn medicine was from a textbook but that the only real textbooks were individual patients. Logically, if the intern is to become familiar with the natural history of disease he must study the patient during the preliminary period in the dispensary or emergency room, while the diagnosis is being established and therapy applied at the hospital, and then the evaluation of results at follow up.

Finally, it is most desirable that an appraisal be made in terms of objectives. Is the group being trained to meet the needs to be encountered in practice?

Systematic outlining of the intern's duties and supervision of his introduction to them have been provided in only a few hospitals. Frequently this function has been left to the casual attention of a resident, an older intern, the charge nurse, or a member of the attending staff, as problems arise. During the first few months of his service, the intern is eager for instruction, has not become fixed in bad habits, and can be molded to sustain high standards. It is the most critical period of the entire house staff experience and probably of the whole plan of medical education. Besides his urgent need of learning to carry out techniques carefully and skillfully he needs active guidance and appreciation from his elders in his efforts at diagnostic studies. Too often a painstakingly recorded history and physical examination are ignored, and a bad example of snap judgment as to diagnosis and treatment is given by a hurried member of the visiting staff. Very frequently no attempt

has been made to define and outline the content of acceptable case records, and to the record librarian has been delegated the impossible task of editing these reports. Such irregularity makes utilization and checking by the attending staff difficult, and it encourages careless habits and short cuts. Conversely, where uniformity exists there is increased interest in the intern's work, habits of exact observation are encouraged, and there is stimulation for clinical investigation. While the task is a tedious one, the only first class records are seen where the chief of the service takes personal responsibility for enforcing standards. In the majority of instances the interns are left too much to their own devices under the comfortable assumption that, if sufficient initiative and interest are displayed, adequate instruction will be given.

If standards are to be set, the proportion of interns to patients must be properly adjusted. There is need of proper balance of qualitative and quantitative criteria. The usual method of estimating case load by calculating the ratio of house staff to beds is far from accurate in revealing the actual picture. Great variation exists in bed occupancy. The presence or absence of an ambulance service makes a vast difference in the number of interns who are available for work in the hospitals. The ratio for the entire group does not portray the difference between services.

If future needs in practice are considered, it is necessary to visualize what conditions our graduates will be asked to face. Since all may presumably enter general practice, such needs must be first considered. According to the Final Report of the Commission on Medical Education, the ten most frequent demands on the general practitioner are:

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|----------------------------------------------|-------------------------------------|
| 1. Infections of the upper respiratory tract | 6. Venereal diseases |
| 2. General medical diseases | 7. Throat infections |
| 3. Minor surgery | 8. Pneumonia |
| 4. Gastro-intestinal disorders | 9. Contagious diseases |
| 5. Obstetrics | 10. Ear, nose, and sinus infections |

Even brief consideration reveals why so many interns are ill fitted to enter their careers. Few have any experience in dealing with contagious diseases or venereal problems. Facility may have been acquired in tonsillectomy, but little skill obtained in the diagnosis and care of otitis media, sinusitis, and various throat infections. Pneumonia may be well handled, but without much idea of what to do for the common cold. A vast amount of time is usually spent in assisting with major surgery, but little instruction is given in minor surgical technics. Some hospitals offer no obstetrics at all and many in insufficient amount. Physical therapy as applied in general practice is a neglected field. There is a pressing need for a shift from almost complete emphasis on the curative and technical aspects of medicine to include training in the widening field of preventive medicine and public health.

Too often our hospitals move and have their being in a small cosmos of their own. Objectives for the house staff do not reach beyond the limits of the hospital walls. The cloistered existence of the intern gives him little opportunity to select for himself the training

that will best fit him to serve the community. Practical suggestions for meeting hospital deficiencies must be guided by the abilities and capacities of each institution to carry them out. Both city and voluntary hospitals are struggling with serious financial limitations. Changes involving additional expenditure can be undertaken only after consideration of ways and means. In private hospitals it is desirable to have at least 50 per cent of the patients in the general service, if teaching standards are to be upheld. A voluntary attending staff cannot be expected to spend additional hours in teaching if its members already are barely making a living. The solution, therefore, appears to be in organization and systematization of present resources and facilities. A few illustrations to show my meaning will be given:

1. The preparation of manuals by some of our better hospitals specifying the basic essentials for adequate care of the patient could be extended to others with great benefit, particularly those in which the attending staff rotates on duty. Such a manual has been in use for several years in the Third Medical Division of Bellevue Hospital. It is of especial value in that it provides training for the staff in both general and special medical methods. Being frequently revised, its educational influence is profound. The surgical service of the Peter Bent Brigham Hospital in Boston has an admirable booklet, both in spirit of conception and in content. It serves as joint guidance for both the medical and nursing staffs. Books of nursing procedures are found in the wards of all our hospitals, designed to anticipate the doctor's needs. A curious omission is that of a complementary book to teach the interns how to use the nursing provided.

2. Regular, separate departmental conferences are a basic essential. The residents and interns take an active part in preparation for these meetings and receive some of their best education as they participate. An unfortunate tendency has been to hold one conference for the entire hospital with crowding of the house staff into the background. The attempt to cover statistics, mortalities, morbidities, interesting cases, and pathologic material for all services in a single hour's time is a physical impossibility.

3. If the intern is to follow his patient throughout the course of his illness, a definite provision must be made for regular assignment to the dispensary. There is a growing tendency to set up a half or full-time schedule over a period of weeks or months. Supervision is furnished in part by the senior members of the attending staff. There is no reason why all interns may not regularly have their place at follow up.

The training possible in the various special clinics of the out-patient department is of utmost practical value and cannot be duplicated in the wards.

4. The reason why so many hospitals lack a satisfactory library has been their inability to finance a full-time librarian. An ideal arrangement, when architecturally possible, has been to place the reference and record libraries in connecting rooms or suites, with the record librarian in charge of both. Another plan has been to place a full-time employee, as the anesthetist or the operating room secretary, in control. Both methods have been tried and have been successful. With this basic essential, books and periodicals have been freely

provided by members of the staff and their friends. Weekly journal clubs can then be organized which are of far-reaching influence on reading habits.

The lack of adequate libraries in some hospitals in the past has been the chief reason for provincialism, unscholarly habits, and unprogressiveness.

Nothing has been said up to this point of formal lectures. This has been intentionally left to the last. Too often, when intern training has been considered, the first impulse has been to plan a series of lectures. Very frequently these have failed of their purpose. An arbitrarily arranged curriculum is about as interesting as the routine perusal of a textbook. In hospitals without medical school teaching services, the best substitute seen has been the organization of a weekly seminar by the interns themselves. The speakers invited and the topics discussed are interesting to the interns, as they deal with problems encountered in the hospital.

In conclusion, I would venture the assertion that our hospitals must face the need of a more adequate basic internship. Judging from the thousands of young men who come to New York from all parts of the United States and Canada for additional hospital training, it would appear that the one-year rotating internship most of them have obtained is insufficient for their needs. As already mentioned, more than half of the house staff groups is drawn from sources outside the city. It will perhaps be surprising to some that a preliminary poll of our metropolitan intern population indicates a desire among most of them for a three-year house-staff experience. Nor is this wish based on the expectation that such a length of service will turn them out as qualified specialists. It will merely fit them for the needs of modern general practice with extra training in one field.

The function of the resident or fellow is manifold. He furnishes continuity of program in upholding standards, supplements necessary instruction of interns, and carries out special studies. His progress toward specialism depends on the number of years spent. The criteria formulated by our national boards of specialization have already had a marked effect not only in lengthening and improving existing residencies and fellowships but in stimulating the creation of new ones.

It appears that the method of preceptorial training in a private office or by progression on the special staffs of hospitals is not going to satisfy the needs of the future.

To give the house-staff experience its proper place in medical education, a larger number of attending staff members with a teaching interest must be provided. Osler once remarked that "a good teacher was a man who could think, could express himself, and had well-developed technic." To this he added the essential qualities of "enthusiasm, that deep love of a subject, that desire to teach and extend it, without which all instruction becomes cold and lifeless, and, secondly, a full and personal knowledge of the branch taught, not a second-hand information derived from books."

Such an ideal cannot be attained without thorough and intimate study of every patient encountered. If each attending staff member will set for himself the goal of thorough supervision of his interns in the carrying out of essential case studies, he will reap the re-

ward of a profound understanding of medicine. Perhaps the best way to understand a subject is to teach it. In the last analysis, by setting high standards for our interns and living up to them ourselves, the fundamentals of an adequate teaching program are achieved.

The spirit of progress is not evolved from a consideration of abstract ideas, but from living, moving forces, swelling from beneath the surface, which give birth to new methods and courses of action, impelled by the necessity of meeting the growing needs of mankind.

It is imperative that medical groups throughout the country intensively study their own local problems. The zeal and dynamic for their solution must come from within each hospital community. Only thus may the American Medical Association be given proper support in its nation-wide task.

4. The Advisory Board for Medical Specialties and Its Relationship to the Hospitals, *by G. Harvey Agnew, M.D.**

THE last few decades have witnessed two widespread developments in our campaign against disease. One has been the tremendous increase in the number of hospitals and the other has been the strong tendency to divide the field of medicine into more or less clearly defined specialties. Of the problems thus created, one to which the medical profession is giving increasing thought at the present time is that of setting up standards by which to evaluate the ability of its members to practice as specialists. Naturally the hospitals are vitally concerned in the progress of such effort, inasmuch as many specialties are now practiced largely and sometimes almost entirely within hospitals, and hospital administrators are frequently placed in an embarrassing predicament because of their doubts concerning the ability of the individual to perform specialty procedures.

For some years there has been a number of specialty examining or certifying "boards" which have granted certificates of membership to those giving satisfactory evidence of qualifications in those particular specialties. These boards have been very beneficial in that they have exercised some restraint upon the indiscriminate posing as "specialists" of those not properly qualified. However, there has been some lack of uniformity in the requirements—some boards have had much more rigid standards than others—and there has been obvious need for greater coordination of activity. In 1933 the Council on Medical Education and Hospitals of the American Medical Association was asked to formulate standards based upon those of certain existing specialty boards of high standing, and to recognize present or future boards which would meet these standards. These essential standards were adopted simultaneously by the Council and the Advisory Board in June 1934 and ratified shortly thereafter by the House of Delegates of the American Medical Association.

To achieve more effectually this coordination and to associate the development with other organizations interested in graduate medical education and training, it was decided

* Adapted from *Bull. Am. Hosp. A.* 9:43-47, July 1935.

to set up an Advisory Board for Medical Specialties. This Advisory Board was formally constituted on February 11, 1934, and the following organizations made up the original members: the Association of American Medical Colleges, the American Hospital Association, the Federation of State Medical Boards of the U.S.A., the National Board of Medical Examiners, the American Board of Ophthalmology, the American Board of Otolaryngology, the American Board of Obstetrics and Gynecology, and the American Board of Dermatology and Syphilology. Since this organization meeting there have been added to the Advisory Board, the American Board of Pediatrics, the American Board of Psychiatry and Neurology, and the American Board of Radiology. As boards in other specialties, recognized by this Advisory Board, become properly organized and approved, they also may be elected to membership in this joint body. The Advisory Board has been exceedingly fortunate in having as president Dr. Louis B. Wilson of Rochester, Minn., and as secretary Dr. Paul Titus of Pittsburgh, Pa. Each member organization has two representatives on the Advisory Board, those representing the American Hospital Association being Dr. Robin C. Buerki and Dr. G. Harvey Agnew.

The primary purpose of this board is to "act in an advisory capacity to such organizations as may seek its advice concerning the coordination of the education and certification of medical specialists" (Constitution, Article II). One of the first duties, as outlined by Dr. J. S. Rodman in his address at the Philadelphia meeting of the American Hospital Association, has been "to decide upon the fitness of other specialty boards, as they are organized, to really represent their given specialty, as well as the probable fitness of its personnel to conduct qualifying examinations."¹ The cooperation of the national and state medical boards of examiners indicates a close linking up with licensing bodies—a desirable feature; the participation of the colleges links up the movement with education; the backing of the American Medical Association gives the endorsement of organized medicine and the inclusion on the board of the leading hospital organization provides a much desired link with the hospital field. The Josiah Macy, Jr. Foundation of New York City has supported this Advisory Board by generous grants, thus indicating its recognition and approval of this work as an educational movement.

To what extent are our hospitals concerned with the setting up of this Advisory Board? Needless to say, any development which will raise still higher the standards of medical practice and which will advance to that extent the health of the people meets with the hearty approval of our hospitals. After all both the medical and the hospital fields have the same objective—the healing of the sick. But the hospitals are interested also from a very practical angle. At almost every hospital convention the perennial question reappears, usually at a round table discussion, "How can a hospital and its medical staff control the practice of major surgery and other specialty procedures?" This may not be a difficult matter in large, highly organized institutions, but it is a real and serious problem in smaller institutions many of which are operated on a semi-open or wide-open basis, and the setting up of this Advisory Board should help to clarify this situation.

¹ John S. Rodman, *The Advisory Board on Medical Specialties*, *Tr. Am. Hosp. A.*, 36:536-539, 1934.

Some yardstick of approval is needed. The holding of postgraduate or honorary degrees, indicating special training or ability in certain fields, has been of real help and the certificate of a board in one of the specialties has provided a much needed basis for adjudging the ability of the individual to undertake various responsibilities. However, the boards, acting separately and apart, have frequently found progress slow in obtaining recognition from hospitals and the medical profession as a whole. Also the general public has been exceedingly slow in demanding certification of those who would provide them with specialty services. It would be anticipated that with the establishment of this Advisory Board there would be a definite stimulus to the wider recognition of specialty certification on the part of the profession, the hospitals, and the public. Already all existing boards have applied for membership. Several have tightened up their qualifications, and some have been accepted. It would seem to be a reasonable anticipation that before many years every medical graduate desiring to practice a specialty would make every effort to obtain what should be a *sine qua non* certification by his specialty board.²

The American Hospital Association was invited to join the Advisory Board early in its formative stage, for it was recognized that the hospitals would naturally play an important part in the future program of this movement. Our hospitals can cooperate in two ways particularly:

(1) *The training of specialists.* Without the practical training afforded by residencies in hospitals, the training of specialists would be greatly handicapped. The Council on Medical Education and Hospitals of the American Medical Association has approved a fair number of residencies in various special fields, but there is little doubt but that, as the taking of a specialty board examination becomes the recognized practice for specialists, there will be a demand for still more approved residencies to provide the required training. According to the Essentials for an Approved Special Examining Board, each applicant must be a graduate of a recognized medical school, have had at least one year's internship in an approved hospital, and (by January 1, 1938) have had in addition "not less than three years in clinics, dispensaries, hospitals or laboratories recognized by the same Council as competent to provide a satisfactory training in the special field of study." Each specialty board is engaged at the present moment in making a survey, for publication, of graduate training facilities, including special internships and residencies meeting with the approval of these boards and the AMA in the hospitals of the United States.

This period of specialized preparation should include: (a) intensive graduate training in anatomy, physiology, pathology, and the other basic medical sciences, which are necessary to the proper understanding of the specialty in question; (b) an active experience of not less than eighteen months in hospital clinics, dispensaries, and diagnostic laboratories recognized by the Council as competent in the specialty; and (c) examination in the basic

² Members of the medical profession in Canada are in a somewhat different situation. In addition to, or as an alternative for, certification in one of the specialty boards or the holding of one of the American fellowships, an unexcelled and much favored criterion of ability is provided by the holding of the Fellowship (F.R.C.S.) of the Royal College of Surgeons of England, of Edinburgh, of Ireland, or of Canada, or the corresponding degrees in medicine, M.R.C.P. or F.R.C.P. (Can.). Plans are now being developed for the certification and *licensing* of specialists.

medical sciences of a specialty as well as in the clinical laboratory and public health aspects. An additional period of two years of study and/or practice is required before examinations may be taken.

From the foregoing it will be apparent that our hospitals could do a great deal to develop more extensive and still better residencies. In some instances this might mean additional organization, more equipment, and a somewhat higher cost because of some increase in staff and the necessity of developing educational facilities in the hospital and perhaps in cooperation with nearby medical schools. This, however, would not necessarily be so, for simple readjustments of intern schedules and senior appointments might suffice. Under any circumstance any additional cost should be compensated for by the better service provided, the greater scientific atmosphere in the hospital, and the obvious contribution which such action would make toward the public welfare.

(2) *Specialty qualification for staff appointment.* The other way in which hospitals could assist the development of these standards is in respect to staff appointments. At the present time hospitals have no general standard of qualification, the attainment of which is necessary to become eligible for staff appointment in a specialty or to become a chief of service. It is very doubtful if any rigid basis of qualification could ever be worked out to the satisfaction of all parties, and the basis of qualification for a closed teaching hospital would be vastly different from that of a rural hospital where all local doctors are usually eligible to undertake whatever they feel competent or compelled to do. However, in all large hospitals and in those of moderate size in communities where there are specialists, it would be distinctly in the interests of the public, the hospital, and the profession if it were required that all heads of specialty services have their specialty board certificate. As an example of how this would be a protection to the hospitals it would be possible for the hospital, when pressure would be brought to bear on it from a philanthropic benefactor who would urge the appointment of some favorite but perhaps incapable doctor to the staff, to point out that the doctor in question would be eligible for appointment if certified by his specialty board but apparently would be unqualified for the appointment by not having such certification.⁸

As boards have not yet been set up and approved for general surgery and internal medicine, this requirement could apply at the present time to the departments of ophthalmology, otolaryngology, obstetrics, gynecology, dermatology (and syphilology), pediatrics, psychiatry and neurology, and radiology. Whether or not all, or all but very junior, appointments should carry the same requirement could be determined by each individual

⁸ At the March 1935 meeting of the Council of Community Relations and Administrative Practice it was recommended to the Board of Trustees of the A.H.A.:

1. That there be prepared and made available to hospitals explanatory literature concerning the objects and purposes of the Advisory Board of Medical Specialties;

2. That all hospitals with departmentalized medical services be requested to give serious consideration to the advisability of requiring future appointees to the chieftainship of specialty services (and to such other appointments as may be considered advisable) to hold the certificate of that particular specialty board; and

3. Moreover, that such hospitals be asked to consider, when appointing young doctors to junior staff positions, whether or not their earlier postgraduate preparation has been such as to render them eligible after due experience to apply for examination by one of the specialty boards.

hospital in consultation with its medical staff. Such action on the part of the hospitals would give a tremendous impetus to this worthy movement.

Supplementary note

By the end of 1941 fifteen specialty boards were functioning: anesthesiology, dermatology and syphilology, internal medicine, neurological surgery, obstetrics and gynecology, ophthalmology, orthopedic surgery, otolaryngology, pathology, pediatrics, plastic surgery, psychiatry and neurology, radiology, surgery, and urology.—Editors.

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CHAPTER VII. NURSING EDUCATION AND NURSING SERVICE

1. Who Is Concerned with the Reform of Nursing Education? *by Samuel P. Capen**

NURSING is a very old occupation. It is a very new profession. It is an emerging profession, not yet fully recognized as a profession. In order that these statements may not be misinterpreted it is pertinent to inquire what are the characteristics of a profession. Perhaps the best definition is the one proposed several years ago by Dr. Abraham Flexner. A profession, he says, involves intellectual operations with large individual responsibility; it derives its raw materials from science and learning, these materials being organized with a view to a practical and definite end; it possesses a technique which can be communicated through an orderly and highly specialized educational discipline; and it is essentially altruistic in motivation, practiced not primarily for private gain but primarily for the benefit of those whom the professional worker serves.

It is plain to every one who has examined the occupational activities of the nurse that nursing exhibits these characteristics. Nursing is a profession, just as teaching is a profession, although not all practitioners of either calling are equipped to carry on their respective occupations with full professional competence.

If a profession involves intellectual operations based on scientific materials and if it possesses a technique communicable through educational procedures, society must provide the means for prospective practitioners to acquire the requisite knowledge and skill. In the case of the long-established professions the public has recognized for some years the need for effective institutions of professional education. It has supported these institutions with increasing liberality. Of late it has even become intelligently critical of them and has demanded improvement in their operations. New professions, however, and old callings which gradually rise to the professional level, generally have to wait some time before the public becomes fully aware of their function in the social order and insists upon the provision of appropriate training agencies.

We are likely to forget that professional education in America through the medium of professional schools is a relatively new thing—hardly more than one hundred years old. Especially we are prone to overlook the fact that the standards of all types of professional schools were lamentably low until within the present generation. The present national establishment for professional education represents the outlay of millions of dollars and includes hundreds of thousands of students. It is one of America's most conspicuous educational achievements. But it is very new. It has been created largely within half a century. Moreover, within the relatively short period of its evolution professional education has passed through several cycles.

* Adapted from *Mod. Hosp.* 43:67-70, Dec. 1934.

The first was the apprenticeship cycle. Under the best conditions, there probably never has been a more effective method of educating a professional practitioner than the apprenticeship method. But conditions were generally not of the best. Generally they were very bad indeed. Moreover, quantitatively as well as qualitatively the apprenticeship method fell short of meeting the demands.

The second cycle might be described as the cycle of expansion. Schools sprang up to supplement apprenticeship. And because of the rapidly growing market for professional and expert services, professional schools multiplied with astounding rapidity. Often they came into being without adequate provision for equipment and without any resources whatsoever. Most of the earliest professional schools imposed no educational requirements for admission. Almost anyone who applied was accepted. These institutions commonly made a handsome profit.

Let me repeat: this is not ancient history, it is modern history. This second cycle in the development of professional education in America has not yet been run through. The older professions began, however, to leave it behind them some twenty-five or thirty years ago. There followed then the third cycle which was that of regulation and standardization. Professional and educational organizations, together with state regulating authorities, have set up standards for professional schools and have enforced general conformity to them.

The cycles overlap. Professional education is still involved in the third cycle, that of standardization. But it has also entered a fourth. Standards cannot be enforced unless they are first defined. Rough and tentative standards can be drawn up with little trouble. If the standards are to be precise, however, if they are to be galvanic rather than repressive, they must be based on frequent and searching study of the educational processes they are designed to regulate. The fourth cycle, the cycle upon which professional education has recently entered, I would describe as the cycle of critical analysis—analysis of professional activities, analysis of materials of instruction, analysis and often condemnation of the standards adopted.

I am struck by the fact that nursing education is passing through all four of these cycles of development at the same time, that today it is recapitulating practically the whole history of American professional education. Nursing education is still to a large extent education through apprenticeship. Schools of nursing have spread themselves across the map with a rapidity and in a volume unparalleled in the history of any other profession, and they were still spreading. The majority of these schools have been quite comparable to the schools of law and medicine of fifty or sixty years ago, lacking adequate physical equipment, adequate personnel, financial resources; making a profit even though the profit did not inure to the teachers and proprietors.

The standardization of nursing education has been going on for some years chiefly through regulation by public agencies. And now the leaders of nursing education are engaged in a critical analysis of their calling, of the type of contribution it should make to society, and of the means whereby the profession is recruited. If I am correct in my esti-

mate of the situation, the leaders of nursing education are in a peculiarly advantageous position to benefit by American experience in other branches.

I should like to point out what seem to me the most important conclusions to be drawn from American experience with the development of other forms of professional education and to relate them to the present status of nursing education. I invite your attention to four conclusions.

The first is that a financial investment is necessary to establish and maintain a satisfactory professional school. Most types of professional schools need money, over and above the amount paid by students in fees, not only for physical equipment but also to cover the costs of operation. The income derived from student fees may support schools training for those professions which do not involve the use of laboratories and apparatus. Such income cannot support adequately a school which prepares for one of the scientific professions. The evidence on which this conclusion is based is nationwide. Its validity is universally conceded.

It is superfluous for me to point out that this primary requirement for the establishment and maintenance of an acceptable professional school is not met by the overwhelming majority of schools of nursing. A typical school of nursing has no investment behind it. It derives no income from student fees; on the contrary its students are paid, and still the whole operation is judged to be profitable to the hospital to which the school is attached. The profit is the product of the student's work in caring for the hospital and its inmates.

Student services cost less than those of trained persons. The student's professional education is therefore nearly always in competition with the needs of the hospital. The value of the student's labor in keeping the institutional routine going takes precedence over its value to her as a means of professional education. Schools of nursing cannot be satisfactory institutions for professional education until the educational advantage to the student is the controlling factor in the assignment of her duties.

The second conclusion to be drawn from American experience in professional education is that professional schools should be conducted by trained teachers who are devoting their lives to teaching. Some types of professional schools can profit by enlisting the services of professional practitioners as part-time teachers. But it has become clear that no acceptable professional school can be managed or taught solely by persons whose primary interest and responsibility lie outside the field of teaching.

A corollary of this conclusion is that those who organize and direct the educational program should have had special training for this function and should be given an opportunity to exercise it over a considerable period of years. The crystallization of school policy and the organization of an economical routine of operation cannot be accomplished overnight. They cannot be accomplished by a kaleidoscopic succession of supervisory officers unfamiliar with the problems involved. The development of a curriculum also is a slow process. Competent persons must spend time on the job.

I do not need to point out how sharply the conditions prevailing in the majority of nursing schools contrast with the conclusions which other professions have reached on these

matters. In respect to both trained staff and competent continuous direction the majority of schools of nursing have a long way to go before they reach the standards now commonly in force in other types of professional schools.

The third conclusion suggested by the experience in other fields of professional training is that a reasonably high level of preliminary education is a prerequisite for successful professional study. Preliminary educational requirements for all types of professional schools have been steadily raised within the past two decades. All professional schools in other lines now require a preliminary education at least equal to high school graduation. For entrance into schools of law, medicine, and dentistry at least two years of college study is required. The state of New York makes high school graduation a prerequisite for admission to a school of nursing. But in most parts of the United States the educational standards for entrance are far below this level.

The fourth conclusion deriving from our experience in other fields is that apprenticeship methods are wasteful. In every type of professional school there has been a steady transfer of emphasis from apprenticeship methods to academic procedures. This has not always been deliberately brought about. But trained teachers find that the bodies of essential knowledge embraced by their respective specialties constantly increase, and that students learn faster and grasp the scope of the profession as a whole better by the more indirect methods of classroom and laboratory. Nevertheless, practical training, which apprenticeship gives in the most realistic way, is also essential. Where apprenticeship methods have been too completely discarded some substitute for them has to be found. In nursing education this transfer of emphasis has only just started. The type of apprenticeship training that still exists in nursing education is unique, and uniquely valuable. It must not be lost. In the reform of nursing education which all of us believe impends it will be incumbent upon the leaders to strike a balance between the practical and the theoretical more successfully than have their colleagues in other professions.

Who is concerned with the reform of nursing education? Teachers in schools of nursing, of course; those members of the profession occupying executive positions, of course; state educational officers, of course. But the public is also concerned. The public is vitally concerned with the quality and quantity of professional service. Hence it is concerned with professional education. It is just as much concerned with nursing education as with medical education or the training of teachers. The public must pay for professional education just as it pays for professional service. Experience has shown that it will pay as soon as it understands the necessity.

It is important that more than a handful of the schools of nursing should be educational institutions. It is important that there should be no schools of nursing that are not educational institutions. What is an educational institution? I will attempt a rough definition. An educational institution is an institution whose primary objective is the progress in knowledge and skill of the students. It makes no demands on its students which tend to interfere with or retard their acquisition of knowledge and skill. It is conducted by persons qualified by training to serve as teachers and administrators. It is supported by funds.

adequate for the accomplishment of the ends to which it is devoted. It is not operated for profit.

The community's responsibility in this matter is plain. It is incumbent upon the community to demand adequate institutions for the professional education of nurses, an adequate number of institutions, institutions adequate in human and material facilities; and to see that they are supported. The community has a responsibility likewise to replace as soon as possible all institutions which depend upon the labor of students for the economical conduct of another enterprise which is not educational.

In making this statement I do not mean to reflect on the motive of hospitals in establishing and maintaining training schools. In the majority of instances the motives have undoubtedly been of the highest. Under the present system great progress has been made not only in hospital efficiency but also—and in spite of all obstacles—in nursing education. But the system is now seen to be obsolete. It must be superseded as soon as practicable.

How is the community's responsibility to be brought home to it? It seems to me that three groups of persons are under obligation to act as interpreters. Three groups of persons must collaborate in making plain to the community the need for appropriate nursing education and the course that reform must take. These are the nursing profession itself, hospital authorities, both board members and executives, and the officers of universities.

The profession has already done its part. The voice of the profession has cried aloud for many years. At first it cried in the wilderness and none would listen. But the profession refused to be discouraged. At its instance during the last two decades studies have been made and published which revealed the fundamental weaknesses of the provisions for nursing education. The last of these studies, that of the Committee on the Grading of Nursing Schools, was in a large measure financed by the voluntary contributions of the nurses themselves. Equally self-sacrificing devotion to a great public cause has perhaps never been shown by any other profession. At least I know of no parallel example. Indeed, the nurses have done their part.

But the hospital authorities and the universities have not yet fulfilled their obligations. It is now their turn. Hospital authorities have something to lose and a great deal to gain by reform. I do not minimize the difficulties. I know that reform cannot be effected suddenly, however much hospital authorities may judge it to be desirable. But I venture the assertion that no board member or superintendent of a hospital which conducts a nursing school has any right to accept the present situation complacently. No board member or superintendent dares to be satisfied until the school for which he is responsible is either converted into a genuine educational institution, with whatever it may need of additional financial resources and educational affiliations, or is discontinued.

The obligation resting upon the universities is scarcely lighter. Universities are the principal agencies maintained by society to conduct professional education. It is the function of universities not only to offer the types of professional education already well established but also to be alert to the educational requirements of new professions and to organize new kinds of professional training as soon as the need becomes manifest. Thus far the majority

of universities have been peculiarly blind to the problems of schools of nursing. But their future role is clearly defined. They must both interpret these problems to the world and bear a hand in the study and further development of nursing education.

2. Marching Forward in Nursing Education, by Mary M. Roberts, R.N.*

THE word "marching" implies progress, through organization, toward a stated objective. It conveys a sense of effort, but of effort tempered by rhythm and unity of purpose. In marching, the weaker members of a group carry on more effectively as a part of the column than they could alone. If we are marching under orders the orders are those of social necessity!

If we are "marching forward" how shall we measure our progress? It has been stated that¹ "The span of sixty years since nursing schools were first established in this country divides itself quite naturally into three periods of about twenty years each. The first from 1873 to 1893 was distinctly a pioneering period . . . the outlines of a curriculum were taking shape and the need of a more systematic program of instruction was soon recognized. The second period from 1893 to 1913 may be called the boom period in nursing education. The new system was so useful and popular that practically every hospital wanted a school of its own and the multiplication of both hospitals and schools went ahead at an amazing rate. Some of this new construction was sound but a great deal of it was as flimsy and ramshackle as the jerry-built shanties of boom towns." This was the period when nurses in state after state secured nurse practice acts, in an effort to raise the general level of attainment in nursing schools and, in so doing, to protect patients from incompetent care.

"The third period, from 1913-1933, may be called the period of standard setting and stock-taking." In this period of stocktaking successive studies were made which pointed out, more or less specifically, the strength and the weaknesses of our educational system. They were:

1. The report of the Committee on Nursing and Nursing Education in the United States (Goldmark Report, 1923)
2. The reports of the Committee on the Grading of Nursing Schools: (a) *Nurses, Patients and Pocketbooks* (1928), (b) *Nursing Schools Today and Tomorrow* (1934), (c) *An Activity Analysis of Nursing* (1934)
3. The reports of the Committee on the Costs of Medical Care (1928-1933)
4. The *Survey of Public Health Nursing* (1934)

These studies provide some useful bases for judgments as to whether we really are "marching along in nursing education." Some of the questions the Grading Committee found it necessary to ask would be utter absurdities in any field of education except nurs-

* Adapted from *Hospitals* 10:9-14, May 1936.

¹ Isabel M. Stewart, Curriculum revision, *Am. J. Nursing*, Jan. 1935, p. 58. Presented at the Colorado Hospital Association meeting.

ing. "Has the school full-time instructors?" was such a question. It was possible only because nursing schools had not yet discarded the apprenticeship method. But the facts revealed by this question, as shown in the accompanying table, were, and are disconcerting.

1929 (first grading)	42 per cent of the schools
1932 (second grading)	23 per cent
1935 (schools accredited by state boards of nurse examiners)	11 per cent

In 1929 there were only three states in which every school had at least one instructor. In 1932 there were five states, and in 1935 there were fourteen states in which every school had at least one full-time instructor. Marching along? Yes—but it would seem not so rapidly as to upset the economics of hospitals. The report of 1935 shows that only a little more than one-third of all schools had at least two full-time instructors.

Schools of nursing now seem to be connected with slightly larger hospitals than at the time of the second grading. In 1932, thirty per cent of the schools were in hospitals with less than fifty patients; in 1935, twenty-six per cent of the schools were in hospitals of this size. It is probable that very small hospitals found it an economy to substitute graduate for student service. In other words, the graduates of twenty-six per cent of the schools cannot meet the minimum qualifications for staff positions in an official or private public health nursing agency, as set up by the National Organization for Public Health Nursing.² This is significant, for these requirements strongly influence the standards set up for nursing service under the provisions of the Social Security Act. The graduates of these same schools may also be barred from the Nursing Service of the American Red Cross.

Have we made any progress in financing nursing education? At what point should a hospital school of nursing cease paying an allowance? When should it begin charging tuition? Should not the answer to the first and second be: "It should cease paying an allowance when the value of the student's service is not more than, but is equal to, the cost of her maintenance and education"? If that answer is valid, then should the third be: "A student nurse should pay tuition for that part of her nursing education which exceeds, in cost, the value of the service she renders the hospital"?

We have no evidence to show the basis for the decisions, but the facts on this point are as follows:³

1932	Three-fourths of schools paid allowances and did not charge tuition
1935	Less than half paid allowances and did not charge tuition
1932	5 per cent charged tuition
1935	22 per cent charged tuition

Are not these indications that nursing education is marching along to a frank recognition that education costs money, that these costs should not be camouflaged, and that

² Minimum qualifications for those appointed to positions in public health nursing, *Pub. Health Nursing*, Mar. 1936, p. 172.

³ Ella A. Taylor, Allowances versus tuition, *Am. J. Nursing*, Oct. 1935, p. 971.

students, schools, and hospitals must face the fact of costs? And, further, that subsidies for nursing schools must be found?

The clinical weakness of the programs of many schools of nursing has been pointed out by successive studies. It is reflected in the reports of registries prepared by the American Nurses' Association and published monthly in the *American Journal of Nursing*. These registry reports give us an excellent index to the type of service physicians and their private patients are receiving from nurses. Far too many nurses refuse to care for patients having tuberculosis and other communicable diseases, and for psychiatric patients. Even though we discount personal preferences, phthisophobia, and the like, there is evidence that patients are not receiving the skilled care they should have, because nurses are not adequately prepared.

However, here too we are marching along, albeit somewhat slowly. Whereas in 1931 only 40 per cent of the reporting schools gave experience in communicable disease nursing, in 1935 the percentage had risen to 57. Forty per cent of the schools were still not giving courses in tuberculosis nursing in 1935. In 1931 one-third of the reporting schools gave courses in nursing nervous and mental diseases, while in 1935 rather more than half of them reported that they were giving this work. No study has been made of the quality of the courses cited in these data. It is probable that the range is very wide.

With such data as these before them, plus the knowledge that thousands of patients in state hospitals for the mentally sick should have more skilled nursing than is now available, a study of seven psychiatric hospitals—made to determine whether state hospitals for mental disease should offer a basic nursing course—was made under the auspices of the National League of Nursing Education and the American Psychiatric Association. "In many states," says this report, "the richness of the educational resources of a civil state hospital are not yet appreciated by other educational groups." And "more than a presenting opportunity is needed to make them available for nursing education. There must be not only a real interest in education on the part of hospital administrators and physicians, and a willingness to provide nurse instructors and the facilities and equipment essential for teaching and practice, but also a willingness to make available the clinical resources of the hospital and to share the responsibility for the instruction, both formal and informal."

Hospital administrators sometimes seem to feel that the nursing profession has charged off all the weaknesses in our educational system to them. This, of course, is far from being the case. Economic handicaps have inhibited the nursing profession too! Although the Goldmark Report in 1923 clearly indicated the importance of differentiating nursing education from nursing service, it was not until much of the evidence of the Grading Committee was before us that the National League of Nursing Education produced its monograph on *The Nursing School Faculty—Duties, Qualifications, and Preparation* (1933). It was still later—in fact early in 1936—that a committee of the National League of Nursing Education and one of the American Hospital Association jointly produced the *Manual of the Essentials of Good Hospital Nursing Service*. But—we *are* marching along. It is significant and important that nursing is joining ranks with the hospital organizations, as

indicated by two of the publications mentioned. While it is imperatively necessary that we learn to separate nursing education and nursing service in our thinking, even though they may overlap in practice, there can be no possible doubt that the nursing profession must continue to work with hospital administrators to provide good nursing service for hospitals; and by good nursing service I mean service which will meet all the criteria for such service, including legal requirements, for competence. Those who talk of putting the nursing care of patients under the jurisdiction of persons with less preparation than that required for registration in the respective states run grave legal risks, as need not here be pointed out.

Nursing is under heavy pressure from many sources. It has a long tradition of devoted service and of adaptation to human needs. Its educational program not only must be adapted to the needs of today but it must prepare for those of tomorrow. It cannot ignore the economic problems of the hospitals. The hospital is not only the arena in which nurses wage battles for health, it is the laboratory in which the student nurse receives the most vital part of her professional education, but—and this is of equal importance—nursing cannot ignore the incessant demands for more flexible types of community service than we have had in the past. These are coming from the registries and the placement services. They are coming with particular force from the field of public health nursing which, as had been indicated, must respond to incessant changes, including the demands of the social security programs as they develop in state after state. They are coming from such agencies as the Metropolitan Life Insurance Company. A report in *The New York State Journal of Medicine* points out that the best of nursing care is essential in pneumonia but that the Metropolitan Life Insurance Company found, from a study of fatal cases among its policy-holders, that 10 per cent were cared for by the company's visiting nurses, 40 per cent were treated in hospitals, and the remaining 50 per cent received no skilled care of any kind.⁴ In the foreword to the third edition of her classic *Public Health Nursing*, Miss Gardner says, "All early writing fails to give a true picture of public health nursing as it exists today. It is this that has twice made necessary the writing of a wholly new book." Hospital services, private duty, public health nursing—the claims of all three are insistent and no one of them can be ignored. Only nurses know all three. This is why leadership in nursing education must rest with nurses.

The National League of Nursing Education is the oldest of the three national nursing organizations. It makes recommendations in regard to programs and policies in nursing education, and gives assistance to schools and to local and state groups that are looking for help in solving their nursing education problems. Its publications are looked upon as authoritative throughout the nursing world. The *Curriculum*, which first appeared in 1917, is undoubtedly the most important of them all. It was revised ten years later and is now undergoing a thorough-going revision and for precisely the same reason that Miss Gardner found it necessary to re-write her book. It is that new social, medical, and economic forces are beating upon nursing. There have been many misconceptions of the purpose of the

⁴ Quoted in *Quarterly News* of the New York State Nurses' Association, Apr. 1936, p. 44.

National League of Nursing Education in preparing the *Curriculum*. From the beginning, the intention was that it should be used as a helpful and suggestive rather than as an arbitrary or required pattern of nursing education. Schools of nursing are as individual as people with their need for adjustments of patterns. Furthermore, on a basis of accepted principles, there is need for a certain amount of experimentation.

Let us digress for a moment to discuss those agencies which are commonly accepted as having a standardizing function.

1. State boards of nurse examiners. These are bodies legally constituted to maintain minimum standards within a state. They are concerned with the level below which a school may not fall, rather than with the heights to which it may attain.

2. The National League of Nursing Education. Its function is *not*, nor has it ever been in the narrow sense of the term, that of a standardizing agency. It has *no* power to penalize. It is true that it might become such an agency! It encourages good standards through studies, publications, and advisory service. Its membership is on an individual basis.

3. The American Association of Collegiate Schools of Nursing is definitely a standard-making body. Its membership is restricted to those schools, or departments of nursing, "that have definitely committed themselves to the idea of developing their work on a collegiate or professional level and as a part of a system of higher education." The objects of the Association are "to develop nursing education on a professional and collegiate level; to promote and strengthen relationships between schools of nursing and institutions of higher education; and to promote study and experimentation in nursing service and nursing education."

4. A fourth powerful agency, perhaps the most powerful of them all, must be nameless because it is unorganized, it has no constitution, no rules. It is as intangible as the human soul. I refer to the influence of those institutions which, through a fortunate synthesis of personalities and ideals, medical staff, hospital administrator, nursing school, and nursing service, through mutual respect, incessant effort, exalted idealism, and a compassionate and scientific interest in the welfare of their patients, tend constantly to improve the quality of their teaching and so of their services. These are the institutions that discriminatingly extract the essence rather than the form of "standards" and absorb them into the vital processes of their work. It is the schools of nursing connected with such institutions, whether hospital or academic, that might well provide the nucleus of an organization of nationally—or regionally—accredited schools.

Will the revised *Curriculum*, sometimes referred to as the *Curriculum* of 1937, increase the tempo of the educational march? Certainly it should. The revision of the *Curriculum* is undoubtedly the most cooperative project, certainly the most cooperative educational project, ever undertaken by any of the nursing organizations. On the Central Curriculum Committee are represented all types of nursing education and nursing service. Every state nurses' association has had the privilege of nominating a member. It has a group of distinguished advisors drawn from the fields of hospital administration, medicine, and edu-

cation. Representatives of state boards of nurse examiners have met with the committee and have clearly and frankly expressed opinions on the whole question of curricula for nursing schools. The "production committees" of the Central Curriculum Committee, which are working on the outlines of individual courses, are widely representative. These outlines have been placed in the hands of "study groups" scattered throughout the country. Over 2,000 nurses, many doctors, educators, and representatives of other special groups who make some contribution to the education of nurses, have participated. The gathering together of eager, interested study groups is, in itself, an extremely important outcome of the work of curriculum revision. These groups are not passive. They have actively participated in the work of revision. Their suggestions, comments, criticisms, proposed revisions, are now being tabulated by the staff of the Curriculum Committee in order that all may be in usable form for the Central Curriculum Committee when it meets late in May. The chairman of one such group has written, and she reflects the general opinion, that "the study made by our group has been thought provoking and stimulating. It has been of immense value also to the faculties of all the schools of nursing in the state by bringing various groups together to participate in an exchange of ideas and opinions regarding nursing education. It has served to focus our thinking in a way that has not been done previously."

The Curriculum Committee has no secrets. From January to June 1935, *The American Journal of Nursing*, the official magazine of the National League of Nursing Education (and of the American Nurses' Association) carried articles on the organization and philosophy and program of the committee. It is still working along the lines then laid down. The revision is based on the concept of "education as adjustment." This concept embodies "the idea of releasing capacity, stimulating growth and self-expression, participation in social life, the progressive reconstruction of experience and remaking of life, preparation for the duties and responsibilities of life, enriching the life experience and promoting individual happiness as well as social usefulness." "The adjustment aim of education, therefore, implies not only such adaptations as help the individual to survive but the development of will and power to create a better environment for human living." As the chairman of the committee has pointed out, this aim is in conflict with the old idea of training, for that is "a matter of fixing habits and skills by a process of repetition so that when a given situation presents itself a certain definite response will automatically result. The individual may or may not understand why she acts as she does and she may or may not be acting on her own initiative."⁵ In other words, the aim of the proposed *Curriculum* is to prepare nurses to meet with intelligence and sound knowledge the demands which will be made upon them as professional workers.

The early schools of nursing attracted mature women. One of the evils of the "boom period" was the very general lowering of age requirements for admission to nursing schools. The new *Curriculum* is being planned on the assumption that greater maturity is

⁵ Isabel M. Stewart, What educational philosophy shall we accept for the new curriculum? *Am. J. Nursing*, Mar. 1935, p. 266.

not only desirable but essential and that two years in addition to high school is not too much to ask of young women about to prepare for a profession.

It will be recalled that the *Curriculum* of 1917 was built upon the assumption that students should have had at least four years of high school work, but it was not until 1932 that the Grading Committee could announce that the battle for the high school requirement was practically won.

If we are to march forward in nursing education, the time is quite ripe for new entrance requirements to schools capable of giving a sound program. This must not be concerned with age alone. The results of years of psychological research must be made effective in the selection of students through the application of mental and aptitude as well as physical tests.

Another major assumption is that students must have time for study. The *Curriculum* is being planned on the basis of a 44-hour to 48-hour week for prescribed class work and ward practice and it is assumed that 10 hours of outside study must be added.

Final decision as to the time required for the *Curriculum* cannot be reached until the *Curriculum* itself is more nearly completed. Teachers of the nursing arts who are participating in the work are determined to safeguard what are sometimes described as the "practical" aspects of nursing, which might better be described as the heart of the educational program, through which flows the life stream of applied physical, social, and biological science.

Who may it be expected will use the *Curriculum* of 1937? Probably the more advanced schools will quite promptly adopt it in principle. Since no two institutions are exactly alike, provision for modification must be made in each instance.

Many schools will find it a useful guide as they steadily remold their educational programs to meet changing needs. Its fundamental philosophy, its emphasis on preparation of the worker for a place in a changing society, should have a far-reaching influence.

A few state boards of nurse examiners made the mistake of attempting to require all schools within their jurisdictions to adopt what is now "the old curriculum." The League's *Curriculum*, in its successive issues, has always been intended for use as a guide; never as a rule or arbitrary standard. It has been, designedly, in advance of average practice. The basic requirement in any state must be a minimum standard. The League's *Curriculum* may be effectively used as a guide, but not as an arbitrary standard, as the states find it necessary to raise requirements to meet changing situations.

We have, as yet, no national system of accreditation of schools of nursing. It seems clear, however, that we are on the threshold of such a development. The collegiate schools profit from voluntary association for the setting of standards within their own group. So might all schools of good standards profit by some type of organization which will bring their representatives together to work out standards for use in "mutual upgrading." A list of schools approved by such a body would be a boon to potential students and to vocational advisors. It would be a blessing to the progressive graduate nurse who, as she moves from

level to higher level of professional achievement, finds need for precise evaluation of her professional course in terms of academic credit. It would provide incentive to those slower-moving institutions which "march" best when the rhythm is supplied by outside stimuli.

3. Present Trends in Nursing as Affecting Nursing Education and Nursing Service in Hospitals, *by Effie J. Taylor**

TRENDS in nursing as affecting nursing education and nursing service in hospitals are never static. It would be difficult today to prophesy what will happen tomorrow. We are daily reminded that we are living in a world where social conditions are most unstable and where policies may be changed without warning. The ideals and the standards of nursing are always in danger where the economic and political situation is subject to sudden change. The very usefulness of nursing makes its pathway more perilous. Whether or not we, in this country, look upon ourselves as sufficiently secure to follow a truly isolationist policy in relation to political matters, we cannot maintain such a policy in relation to economic and social advancement, and nursing is fundamentally a social institution.

Proficiency in the care of the sick has developed by devious paths from the earliest type of nursing given by the women in the household to the modern idea of nursing as a profession, autonomous in certain aspects and a complement to medicine in others. Its history is filled with interest and with subtle change, partly evolutionary in nature, but universally influenced by the economic and political conditions which determined the thinking of the times. In bringing about improvement in the care of the sick, the practice of nursing advanced in the professional requirements and accordingly in its status. The value of expert care to the sick given by trained and experienced pupils was emphasized by Hippocrates in his advice to physicians: "Let one of your pupils," he said, "be left in charge, to carry out instructions without unpleasantness, and to administer the treatment. Choose out those who have been already admitted into the mysteries of the art, so as to add anything necessary, and to give treatment with safety. He is there also to prevent these things escaping notice that happen in the intervals between visits. Never put a layman in charge of anything, otherwise if a mischance occur the blame will fall on you."¹ It is true that there were no nurses then as we know them today. Hippocrates' directions were given for the use of students of medicine, but in his instructions it is easily perceived that he placed the care of the sick on a very high plane, advising against the use of inexperienced laymen, and placing the responsibility directly on the physician in charge.

Since the establishment in 1873 of the first three schools of nursing, their usefulness to hospitals has been manifested by the rapidity with which they have increased. In 1900 there were 432 schools of nursing in the United States, and in 1926 this number had increased to over 2,100 schools. About this time and later, conditions of unemployment became acute, and the status of many schools was questionable.

* Adapted from *Hosp. Management* 46:31-34, 57, Nov. 1938.

¹ Lucy R. Seymer, *A General History of Nursing*, New York, Macmillan, 1933.

The work of the Committee on the Grading of Schools of Nursing is so familiar to the American Hospital Association and to the American College of Surgeons that it is referred to only for its historical significance. Many changes in the operation of schools of nursing were instituted as a result of the study, and the trends in nursing education and nursing service have been influenced and modified to accord with the findings of that committee. The report had a profound influence on the public and on medical and hospital authorities, representatives of which cooperated with the nursing profession in an attempt to study educational facilities and resources in their local institutions. As a result, many schools of nursing were closed and graduates were engaged to replace students in the bedside care of the sick. In some cases this change necessitated an additional cost to the hospital, while in others it was stated that the cost of employing a staff of graduate nurses was less than the maintenance of a good school. A sufficient amount of cost data upon which to evaluate these statements had not yet been assembled. We are well aware that the actual monetary value of any service is not its only criterion. The quality of nursing care must also be taken into account, and the subtle aspects of satisfaction and economics are difficult to compare and estimate.

The closing of schools and the trend toward the employment of graduate nurses for bedside care in hospitals marked a milestone in the history of nursing. The new concept was not readily accepted by the graduate nurses. For decades the nursing care of patients in the hospital had been delegated to students, and it required a long process of re-education to interest graduates in a phase of work they looked upon as finished when their diplomas had been awarded. Nurses who, since graduation, presumably had been masters of their own fate, and who had enjoyed a personal, independent relationship to their patients, found the necessary routine of hospital life both irksome and arduous. They grew more and more discontented and sought to relieve the tension by a program of continuous migration from one hospital to another, traveling from California to Florida, and from New York to Washington, in the hope of finding freedom and more satisfactory conditions. The problem imposed by replacement in staff personnel became almost intolerable, particularly in some of the larger teaching institutions, where constant change was a very disruptive factor in the program of education and service. During the past half dozen years the turnover in many of our leading hospitals has been tremendous, exceeding in some institutions one hundred per cent. It is obvious that neither a good nursing service nor a good program of nursing education can be maintained under such conditions.

The findings obtained through studies of official registries for nurses throughout the country, and statistics kept by some of the leading institutions where large numbers of nurses are always engaged, indicated difficulties of a major character. Some of these can be traced back to inability over a period of years to maintain standards for the admission of students to schools of nursing. As a result a body of poorly equipped graduate nurses inadequately prepared to carry responsibilities incurred in the care of the sick were imposed upon the profession, the hospital, and the public. It is interesting, but somewhat dis-

couraging, to be told that the principals of schools are entirely responsible for these poorly equipped schools.

The studies to which reference has been made revealed the fact that the turnover in nursing service was partly due to inadequacies in the nurses themselves, to their irresponsibility, independence, and restlessness. It was also partly due to marriage and to other normal causes. The graduate nurses in attempting to give their own point of view stated that the hours were too long, the tenure of office insecure, living accommodations unsatisfactory, the pressure of work too great, the salaries too low, and the satisfaction found in service well done under existing circumstances was greatly lacking.

In reviewing the steps since the beginning of the period of unemployment, it would seem obvious that hospital and nursing executives lacked vision, and sought to ease the prevalent situation by lowering salaries beyond the point which well-prepared women could accept. Consequently, when other positions, in nursing or out of it, could be found, they refused to go into the hospitals as general staff nurses, and in consequence many very good nurses have been lost to the profession entirely. It is interesting to note, however, that the low salary scale was not considered by the nurses as their most serious handicap. Pressure of work, inadequate housing, and the lack of reasonable satisfaction in the position were reasons more often given for resignation.

The experience of the last few years has been fruitful and we have learned many important lessons, among others that if we desire to establish a new type of position within the hospital, we must make it as honorable as any other. In fact every individual in a position has the right to expect the opportunity to do a good piece of work and to receive remuneration commensurate with its responsibility. When we have so rewarded the position of the general staff nurse, and have given her the recognition that should go with so important a responsibility as the bedside care of the sick, we will be able to secure nurses of a good type and keep them on the hospital nursing service.

It is, of course, impossible to offer assurance that nurses will always be available when required, without materially increasing the number who are trained; even so the opportunities for graduate nurses are ever-expanding, and the most interesting fields will always encourage recruits.

A few years ago physicians gave many treatments which are now given by nurses, and have turned attention to other types of procedure which again demand additional and prolonged nursing assistance. The treatments prescribed pre-operatively and post-operatively have increased in number and in technical importance. In consequence nurses are required to give more time than formerly to the care of each surgical patient. The statement is equally true in the care of medical patients and children. In passing, permit me to refer to one type of treatment which has universally increased. It is the administration of saline in various forms. In former years even a few such treatments in a week were looked upon as unusual, but today these treatments number dozens in a day. Not only does this procedure require the close attention of a nurse for a period of hours, but the preparation of various solutions and apparatus consumes a great deal of time. I recall when most of

the solutions could be filtered and prepared for sterilization by the night nurse, while now it is not uncommon to require a staff of nurses and helpers constantly at work in a room or department specifically set aside for this purpose.

The patient turnover in the average general hospital is more rapid than in former years, and the work of nurses is increased in direct relation to admissions and discharges. It is obvious to physicians as well as to nurses that if the majority of patients are acutely ill the nursing responsibilities are proportionately greater. In most of our teaching institutions the resident and visiting staff is larger than in former years, and the procedures used in diagnoses require the help of a greater number of skillful and intelligent nurses.

For the purpose of more intelligently dealing with questions relative to nursing education and to nursing service in hospitals and elsewhere, studies of various types were initiated by the National League of Nursing Education. These were entered into without prejudice and in the interest of honest research. The nursing organizations and the American Hospital Association carried on a cooperative study of nursing service, and presented a report setting forth the principles upon which the conduct of a good nursing service depended. Perhaps the most important place of investigative work which has ever been undertaken by the American Nursing Association, the League of Nursing Education, and the American Hospital Association is that on costs relating to nursing service. Through this study of institutions of varying types and size it is hoped that a uniform method of determining costs will be developed, thus enabling institutions to make comparisons as to relative resources, expenditures, and total costs of nursing education and nursing service. The research projects referred to are only a few of those which have been carried on during the past ten years.

In spite of the many handicaps under which nursing has struggled in meeting its obligations for the care of the sick, it is interesting to note that the number of nurses engaged in hospitals for bedside nursing has increased tremendously. In 1927, 73 per cent of the hospitals with schools did not employ a single graduate nurse for floor duty. In 1937 in 1,200 hospitals, 27,000 graduate nurses were employed as general staff nurses. Contrary to the opinion of many, the student enrollment has materially increased, and the quality of applicants has appreciably improved.

The trend in nursing education is ably set forth in the *Curriculum Guide*, which is one of the most useful books ever published by the profession. The book may be considered by some to be philosophic and idealistic in character, but its policy is clearly enunciated in its title, *A Curriculum Guide*. It was never intended to be used as a catechism or as a text to be slavishly followed. Its purpose is to present standards toward which our schools may grow. The course of study is planned to stimulate in women of more advanced education an interest in nursing. It is the opinion of many who have had long experience that the most intelligent kind of nursing care can be given best by young women whose education and experience in life extend beyond the limitations of high school. It is also the opinion that the nursing care of patients should not be left in the hands of the immature. Not only have we the admonition of Hippocrates in this respect, but we have the experience of sixty-

five years of nursing in America, and the opinions of men and women whose intelligence, judgment, and vision might well go unchallenged in this or any other country. The trend in nursing is clearly pointing to a more careful selection of students who, by reason of advanced educational opportunities, will bring a better-informed judgment to their work.

Another trend which is slowly taking root is the formation of schools of nursing within colleges and universities. An important step has been taken by a number of hospital schools in seeking the use of educational facilities in their nearby institutions. Closer affiliation will eventually be secured, and in the meantime authorities in the field of general education are becoming conscious of nursing and its need for further advantages. It seems rational to infer that instruction in the physical, social, and biological sciences can best be given in institutions of higher learning where facilities and resources are available for this phase of a nurse's education.

The shortening of hours of service for graduate nurses and for students may be looked upon as well on its way to accomplishment, although one would need no more convincing evidence of the way in which students have been used for the hospital nursing service than to note that in considering plans students have been the last group to benefit.

When the eight-hour day is finally established for both graduate and student nurses, a larger personnel will be required for the care of patients. In a number of schools it is becoming a custom to interest as many as possible of the first-year graduates to remain in their own schools for a period of added experience under supervision. In the school with which I am connected, twenty-four members of the graduating class were appointed for the year 1938-39 as assistant head nurses or as members of the general-duty staff. Since all these women are college graduates, it is reasonable to suppose that they must see an advantage in following this course. It would be worth while, in the interest of experience for the nurse herself and for the stabilization of the nursing service, to build up a tradition for this procedure.

The consummation of the trends to which we have alluded are dependent upon financial resources. Indeed the handicapping questions involved are rarely born of convictions of an opposing nature, but rather they are bound up in lack of money. Without separate endowment, hospitals, as community institutions, may not feel that they can carry responsibility for nursing education except under an apprenticeship system, but if nursing education is a means to an end for both the student and the institution, these reciprocal costs should be clearly differentiated. Whether or not actual money passes from one party to the other, a system of accounting should clearly demonstrate the monetary relationship which has been mutually agreed upon. In estimating the cost of nursing service, the functions of the nurse should be clearly defined. In teaching hospitals, the cost of nursing service should be evaluated on a different basis from that in the nonteaching hospital, where practically the entire time of the ward nurses is given to the care of patients. If we arbitrarily estimate that every patient in a medical or surgical ward requires three hours of nursing care during each twenty-four hours, it is apparent that the patient in the teaching

hospital, on the same time budget, would receive less care than the patient in the non-teaching hospital. This thought is worthy of further consideration.

I am convinced that nursing education should be paid for by endowment, by public funds, by tuition, or through carefully estimated working scholarships or scholarships of a different nature. Provision for nursing service should be made through separate budget items. The nursing service required in the interests of medical education should be studied also much more concretely than is done at present.

Whether or not nursing education or nursing service can be financed through public funds, I do not know. Nursing is a public service and the public should assist in providing for it. The question should be reviewed with an open mind, and money might appropriately be set aside by community chests, by hospital funds, by municipalities, or by the state to provide for the nursing care of patients. This indispensable item, which may be the largest single entry in any hospital budget, should not be left to precarious means.

And last, but not least, a decided trend is toward the licensing of all persons who nurse for remuneration. Protection for the patient, the physician, and the profession will not be assured until this step has been taken in every state.

To assert with assurance that a point can be reached when no additional personnel will be needed is impossible unless all the departments in the institution are limited in their demands. The sickness situation in the hospital changes overnight, and there is no way by which emergency nursing service can be accumulated if the regular staff is so small that under average conditions it is taxed to its limit. Nurses cannot be discharged with the hope that they will be available again when occasion demands. To provide a reasonably good service an adequate permanent staff must be maintained at all times and transients employed on a daily rate of payment for overpeak or emergency situations.

In some way or other the public must be made aware of the fact that hospitals need money for the nursing care of patients as well as for its physical plant. If sufficient money is not forthcoming there are two lines of procedure only. One is to limit the scope of the service, and the other is to reduce the amount and quality of medical and nursing care. Hospitals will not, I trust, be forced to consider the latter seriously. Hospital administrators, physicians, surgeons, nurses, and the public have a challenge to think clearly and co-operatively in solving the problems with which our hospitals and nursing schools are confronted today.

4. Nursing Schools and Hospitals, by Nathaniel W. Faxon, M.D.*

THE final report of the Committee on the Grading of Nursing Schools, entitled *Nursing Schools Today and Tomorrow*, is the culmination of a study which extended over eight years, conducted by men and women of position and experience who were sincerely interested in the present and future of nursing schools. It is a book every hospital superintend-

* Adapted from *Hospitals* 10:24-27, Feb. 1936.

ent should read because the operation of hospitals is impossible without nurses and, consequently, as hospital superintendents we are all, of necessity, vitally interested in the education of nurses. The problem of nursing schools is at once a local and a national problem: local because each hospital must determine whether it is to conduct a nursing school, and if so what kind of school and how; and national because educational policies which will be applicable to all nursing schools and all nurses should be formed.

In the United States nursing schools began in 1873. In 1934 there were 1472 nursing schools; 2 per cent of these schools were controlled by universities, the remainder by hospitals; 25 per cent of these hospitals averaged from 8 to 42 patients, 50 per cent less than 75 patients; only 38 per cent had more than 100 patients. One-quarter of these schools had from 3 to 26 students, three-fourths had 71 or less; only 12 per cent had more than 100 students. The average was 43.

In 1873 there was one trained nurse in the United States. In 1930 there were 294,189. Each year 25,000 new trained nurses are graduated. There is one trained nurse for every 416 persons in the United States, varying from one for every 169 persons in the District of Columbia to one for every 1,240 persons in Mississippi. The Committee on the Cost of Medical Care estimates that a reasonable ratio should be one nurse for every 2,272 persons. There is no state licensing of nursing schools. In some states there are restrictions regarding registered nurses, and only graduates of approved schools may take examinations for registration and the right to use the R.N. which distinguishes them from graduates of other schools, practical nurses, and attendants. These licensing boards usually prescribe the requirements for enrollment, high school graduation, length of course (3 years), and the curriculum (15 or more required subjects with experience in 6 types of nursing and 6 more usually recommended). These statements will give you some idea of the magnitude of this problem and the present state of affairs.¹

For what activities (service) are nurses educated, or, in other words, what fields are open to graduate nurses? First and foremost is the nursing of very sick patients in the house or hospital, usually designated as private or special nursing or general duty nursing. In the early years of trained nurses, private duty attracted by far the larger number of graduates. Of late hospital nursing, either as general duty or specials, has come to the fore. Second, as head nurses in hospital wards. They are executives and teachers often who are competent to do the actual nursing if necessary, but whose main duty is to see that it is properly done by others. Third, public health and visiting nurses. School and industrial nurses, an expanding field. Fourth, special nurses such as operating and delivery room nurses, acting as assistants to surgeons. Somewhere between this type of specialty and general nurses are nurses who care for patients with communicable disease and for mental patients. Obstetrical and children's nurses might also be classed as specializing. Fifth, nurses who form the faculties of nursing schools—directors, teachers, and supervisors. Sixth, nurses who act as hospital executives either as superintendents of nurses responsible for the

¹ These statistics and statements are taken from *Nursing Schools Today and Tomorrow*, particularly Chapters 1 and 7.

nursing of patients or as superintendents of hospitals responsible for the management of the institutions, or combining both responsibilities in the smaller institutions.

Throughout the short history of nursing, nurses have shown an inclination and ability to accept new duties and to extend their activity into new fields, so that a great change has taken place as regards the duties of the trained nurse of 1880 and the trained nurse of to-day. What has caused this change? First, I should place general recognition by the doctor and the public of the value of trained nurses. They have not only met successfully a real need in the community but have also developed new fields. Next, the demand by doctors, and acceptance by nurses, that they perform functions formerly performed by doctors, such as the taking of temperature, pulse, and respiration, the collection of specimens, medications including hypodermic and the oversight of intravenous injections, taking of blood pressure, giving of anesthetics, colonic irrigation, management of complicated machines such as respirators and oxygen tents, acting as operative assistants, supervision of preparation of aseptic supplies, and many other duties. Third, nurses have shown greater competence as hospital executives in small hospitals than former lay superintendents. Fourth, as public health school nurses they have taught preventive medicine and hygiene as well as carried on their specific duties of nursing. Every new development in medicine creates new fields for nursing.

This is a record of which nurses may well be proud, but just as every rose has its thorns, so nursing and nursing schools have their troubles. What weaknesses then have developed in our present system? First, there is much concern over proper organization, and uncertainty as to whether nursing schools are properly a part of the educational program of hospitals or whether they should be part of the educational duties of colleges and universities. The Grading Committee has definitely stated their belief that every nursing school should be organized as a professional school and that

every professional school should be under the control of some form of managing board whose primary concern should be the conduct of our educational enterprise. This is because the first duty of a hospital board is to further the welfare of the hospital and the welfare of the hospital is often incompatible with the welfare of the school. No school can flourish on a professional plane when its policies are controlled by a hospital board. The [managing] board should decide matters of educational policy. It should appoint executives and faculty and delegate responsibility to them. In professional schools of nursing this would mean that the board which controls the school would appoint the head of the school and upon her nomination not only the instructors but the supervisors, head nurses and others concerned with the practice phases of student training. Appointments involving hospital responsibility should in addition be subject to approval by the hospital.

These are strong statements of revolutionary character. One member of the committee could not agree and said, "I agree that there should be a separate board or committee, the chief duty of which should be to further the interests of the school. This board, however,

may be advisory only. I believe that the ultimate authority for making appointments may rest with the hospital board without prejudice to the success of the school."

The statement of the Grading Committee is based upon the premise that with few exceptions nursing has been taught in hospitals solely for the economic advantage of the hospital; therefore all hospital nursing schools are poor. Before taking sides on this question it is well to consider the history of one school of nursing. The Massachusetts General Hospital Training School was originally started under the direction of a separate board of directors as the school was entirely separate from the hospital. The hospital paid for nursing service. All expenses of the school were paid by this separate body from 1873 to 1896 when it was transferred to the control of the hospital. The reasons for the transfer were that it was believed better control and management would result and because the cost of running the school had become burdensome. An advisory committee was appointed and the school has since then been run as an integral part of the hospital, the responsibility of the trustees of the hospital guided by the advice and recommendations of this advisory committee.

The crux of the matter seems to be whether hospitals are using schools to their economic advantage to the detriment of the educational needs of their student nurses. Some studies have already been made to compare the cost of operating a hospital with graduate nurses only with the cost of maintaining a nursing school and operating the hospital with a skeleton graduate group assisted by students. More studies of this sort are needed, in fact each hospital conducting a nursing school should make such a study as applied to its own institution. It should deliberately evaluate what the students give in the way of services to the hospital and what the hospital gives in the way of education and training to the student. Gross inequalities in either direction call for readjustment. With expanding curricula, with the provision of better housing for students, with shorter hours of nursing for students, the economic advantage to hospitals conducting schools has greatly decreased, so that in many instances, especially in small schools which have kept pace with educational standards, it has ceased to be an advantage. Where hospitals are using schools to their economic advantage and to the detriment of the educational needs of their student nurses there is no question but that remedial measures should be taken.

In studying this problem of nursing schools it is interesting to note that of all the professions—and I think it is fair to designate nursing as a profession—nursing occupies a unique position as regards the plan and method of education and training. Doctors, lawyers, and ministers, dietitians, social service workers, and hygienists all pay for an educational course of varying length, followed by a period during which they put into practice, under direction, their theoretical instruction, a period in which service on their part is exchanged for the practical training received. Nursing, in general, has exchanged service for education throughout the entire period of training.

Nursing schools and hospitals have been under great pressure during the last sixty years and it is evident that in their desire to meet the needs of sick people in hospitals and to provide enough nurses to fill the expanding fields of nursing, both nursing schools and

hospitals have often neglected education in order to meet the demands of service. Inadequate education in some instances and oversupply in general have resulted. A considerable readjustment is necessary. The great problem is how this readjustment shall be made. Shall nursing schools be set up as separate educational units comparable to medical schools or schools of social service, or shall they retain a more intimate relation to hospitals?

The recommendation of the Grading Committee that all schools should be placed upon a professional basis presents a problem somewhat in the nature of making bricks without straw, in that they would set up separate schools without provision for their financing. It may well be said that up to now nurses and hospitals have together borne the entire cost of providing nurses with an education that fits them to supply the nursing needs of the community, and that now the time has come for the community to bear its share of this cost through adequate financial support of nursing schools. Even though this is a fair statement it is impossible of immediate realization under present economic conditions and can only be advanced as something to be achieved in the future. We are still confronted with the practical question of what to do *now*.

The Grading Committee states that it is desirable that nursing schools should be separate from hospitals, or at least governed by separate boards. Who will finance the school? Will the hospital, having no control over the school, be willing to finance it? If money were available to endow separately all schools perhaps this plan might be worked out with modification as it has been in Minnesota, at Yale, and in other places, but certainly at present most hospitals will have to be content with their present organization and bend their energies toward removing evils and improving conditions rather than toward setting up new organizations. There is much that they can do. Advisory committees for nursing schools—yes. Improvement in educational procedures to better fit nurses for nursing—yes. Additional endowment and financial support from the community—yes. Although the organization of a school is important, may it not be varied? May not academic schools connected with colleges and nursing schools on a professional basis compete in friendly rivalry with sympathetically administered hospital schools? To recommend that all schools must be fitted into a professional mold is unwise.

Second, inadequate schools have developed; schools which are schools in name only, whose real function has been to supply hospital nursing at low cost upon the basis that student nursing was cheaper than graduate nursing. How to eliminate these inadequate schools is one of the perplexing problems. No states license schools, therefore, no police control can be invoked. Shall such licensing control be set up or can the nursing, medical, and hospital associations, through the establishment of minimum standards, gradually bring about the improvement of inadequate schools or their voluntary closing where circumstances prevent their meeting these standards? On the basis that voluntary cooperation is always better in the long run than legislative compulsion, I should personally favor the plan of minimum standards.

Third, an oversupply of graduate nurses. This is an oversupply from an economic or financial standpoint rather than a medical or public health standpoint. It is an oversupply

merely because there are not enough people with large enough incomes to pay or enough people with adequate incomes willing to pay for private nurses and not enough money available from tax funds for public health, school, and other public nursing work to assure all graduate nurses of a reasonable annual income. This oversupply is closely connected with the problem of the inadequate school. Twenty-five thousand graduates yearly are too many. The Grading Committee estimates that 8,600 graduates annually would be sufficient to replace the annual loss through death, marriage, and retirement. Can this be controlled through voluntary cooperation of nursing schools? Can it be controlled through boards of registration? Can it be controlled by legislative action? I think the answer to all these questions is "No." Probably the law of supply and demand, the law of diminishing returns, and similar economic laws will bring about a recognition on the part of the community that nursing does not offer easy money and there will develop a voluntary control by the people themselves led by voluntary cooperative control by hospitals and schools.

Fourth, from an economic standpoint the community cannot afford to use highly trained nurses, whose education represents a considerable community cost per nurse, to perform hospital household duties, to nurse people in their homes for minor illnesses, to care for convalescents and the chronic sick. Neither the public nor hospitals can pay salaries for this sort of service commensurate with the expenditures for training a nurse as she should be trained. Some less expensively trained person must be used. This has brought about the demand for attendants, household nurses, children's aids, to replace with less expensively trained persons the work in these fields hitherto performed by untrained persons. Whether their training can be adjusted with that of nurses or whether it should be separated and how many are needed are so far unsolved problems.

This training of attendants, since it meets an economic need, deserves careful consideration. First and foremost, it must be carefully planned so as not to produce an oversupply and so further complicate the present situation. The number of convalescent and chronic cases, the number of attendants that can be used in hospitals to release nurses from household and the simpler routine duties, is distinctly limited. Trained attendants are better than ward maids or practical nurses but we must profit by past experience and neither overeducate nor oversupply. I do not know the answer to this question of attendants, whether they should be trained in hospitals with nursing schools or in separate organizations, how many there should be, or what length of training is desirable, but I do feel strongly that careful thought should be given to this problem before any definite decision is made or action taken, else we shall make a bad matter worse.

I fear that by this time you are in much the same state of mind regarding nursing schools that I am myself, namely, that we can agree upon the various difficulties as stated but have no clear-cut solution for them. I find it much easier to set down a list of problems about nursing schools than to provide the answers. And yet you and I, with our boards of trustees representing the hospitals, together with the nursing associations representing the nurses, the American Medical Association, the American College of Surgeons, and the

College of Physicians representing the doctors, must somehow work out solutions. We must find a way to:

1. Balance the educational value of the school to the nurse against the service of the nurse to the hospital.
2. Instruct nurses properly so that they may adequately serve the community in the various fields of nursing.
3. Improve the organization and financing of nursing schools.
4. Eliminate inadequate schools.
5. Maintain an economic balance between the cost of nursing education and the income nurses receive.
6. Control oversupply while graduating enough nurses to provide an adequate replacement.
7. Solve the problem of nursing care for convalescent and chronic patients either through attendants or in some other way.

As hospital superintendents it is our duty to study this problem seriously, whether our hospitals conduct schools of nursing or not, and to give our best thoughts and efforts toward working out, in conjunction with nursing associations and others, constructive procedures in this important field.

5. The Next Great Step in Nursing Education, *by A. C. Bachmeyer, M.D.**

SCHOOLS of nursing have shown considerable improvement as the result of years of discussion and of the work of the Committee on the Grading of Nursing Schools but a great deal remains to be done. The rate of improvement should be accelerated. The need for an authoritative mechanism that will bring about a recognition of schools of nursing as educational institutions, that will stimulate improvement in teaching practices, raise the quality of the personnel of the faculties and the scholastic standards of the schools is obvious.

It is but natural that nursing should enquire concerning the situation in other professions and in the field of general education. Have others had similar experience? How did they meet the situation? In a number of instances nursing schools learn that accrediting agencies which classify, grade, approve, or otherwise exercise control over schools have been established. Examples of various types of such agencies are encountered in general education, in the library field, in medicine, dentistry, law, and other professions. Some of these agencies are of long standing and have come to exert great influence, while others are of recent establishment and consequently have not developed.

All are without legal status, but in those instances in which there is legislative control by the states through examinations for licensure to practice, state boards, usually conservative and often subject to political control, have followed the lead of such voluntary agencies and have strengthened their regulations.

* Adapted from *Mod. Hosp.* 46:53-56, Apr. 1936.

American education developed as the result of the leadership and initiative of outstanding educators, largely without restraint or organized control or guidance until the beginning of the present century. Improvement in teaching and in scholastic standards was continuous, but slow and irregular. There were, however, many poor schools and spurious colleges scattered throughout the states. No centralized government control was possible nor can it be unless the Federal Constitution is changed, for that document leaves this control to the individual states.

In consequence of the existing situation, without thought of developing any centralized control or accrediting organization, a number of good colleges and universities formed an association in 1895 for the purpose of bringing about better understanding and relationships between them, to improve scholastic standards and educational conditions within the member institutions, and to encourage experimentation and investigation relating to educational problems. Thus was founded the North Central Association of Colleges and Secondary Schools. Other schools sought to join the Association and through the development of qualifications for membership, the Association, within a comparatively few years, began to wield a strong influence upon the development of secondary and preparatory schools and also upon institutions of higher education. This Association, until recent years, had regulations and prescribed standards that were arbitrary and, while based on the best judgment of excellent educators, were not based upon scientific fact. Because of this and in recognition of the need, the Association recently has revised its entire procedure of inspection and accrediting. The new manual of accrediting procedures presents a flexible program rather than fixed standards and will stimulate improvement in schools rather than have a deadening effect upon initiative and the development of individuality in institutions.

This Association limits its field, as its name implies, to the north central section of the country, comprising the territory of twenty states. Though its decisions are all advisory in nature it is the strongest and most forceful influence for improving school conditions and standards in the country. Its success and value are attested by its continued growth, numbering now almost 2500 secondary schools and 300 institutions of higher education among its members. Membership is deemed an honor by all institutions, giving them a standing among educated men and women and serving as a guarantee of the institution's efficiency. It has no permanent central office, no paid officials, though certain clerical assistance and expense budgets are provided for the performance of its work. The Association transacts its business through an executive committee, special commissions, state committees, and the general body of the Association which meets in Chicago annually. This accrediting agency is an organization of member institutions provided and maintained by them for their mutual benefit. It is an agency which has a wholesome effect because its members subscribe to the high ideals and splendid policies that have been adopted. While other agencies similar in type and function exist in other sections of the country, the North Central Association is cited because it is the oldest and most influential of the group and has furnished the pattern for a number of others.

A somewhat different condition exists among the professions. Here there are accrediting agencies consisting of associations of professional schools, similar in organization to the North Central Association, and also agencies representing the membership of the profession. These latter are bodies having no direct educational functions but which the profession, as a whole, has set up in order to assure constant improvement in the preparation of the new members that enter its ranks. It will serve our purpose to consider one of those agencies in the field most closely allied to nursing, that of medicine.

In the early years of the century, the medical profession became concerned about the conditions prevailing in the medical schools. There were many colleges, proprietary in type, which were graduating poorly trained men. Upon the initiative of leaders in the profession a committee was appointed by the president of the American Medical Association to study the situation. This committee recommended that the Association assume the task of developing a national influence that would exercise control of medical education because it was obvious that there was a great need for improvement in the schools. This recommendation was adopted and resulted in the establishment of the Council on Medical Education and Hospitals of the American Medical Association. As in the case of the North Central Association, this Council had no legal powers, but its influence soon became a potent one. In 1905 it published the first analysis of the results of state board examinations and developed tables dividing the medical schools into four classes on the basis of the percentage of failures of their students in these examinations. This led to an inspection of the schools, in which they were graded on ten factors. The results of this grading were published and while some improvement followed it was not deemed sufficient.

The Council then approached the Carnegie Foundation; it won the enthusiastic interest of President Pritchett, and the splendid report of Dr. Abraham Flexner resulted. His report confirmed the earlier findings of the Council but was more specific and criticized the situation much more severely. Following the publication of that report and even before, many schools closed their doors and marked improvement was effected in others. Since then almost all medical schools have become integral parts of universities and there is constant effort to conduct them upon the high level of university performance. The Council on Medical Education remains active and exercises a vital influence in the field of medical education. The improvement that has been effected in medicine has come about through the active cooperation of the Council of the American Medical Association, the Federation of State Medical Boards, the Association of American Medical Colleges, and other allied groups, including the Association of American Universities and Colleges, and particularly of the Carnegie and Rockefeller Foundations and the General Education Board.

The Council consists of seven members, one appointed each year by the president for a term of seven years. It has a full-time executive secretary, a central office, clerical staff, three field inspectors (whose duties, however, are primarily directed toward the inspection of hospitals) and a budget of about \$75,000 a year. It has adopted certain fixed minimum standards with which medical schools must comply for approval. It inspects schools upon the initiative of the secretary or the members of council as occasion may indicate. Criticism

has at times been directed at the Council for what were considered to be arbitrary actions, but none can say that its influence has been other than in the interests of improvement in educational affairs.

And now to return to the situation confronting nursing. There is at present no national body that exercises any control over or definitely guides nursing schools. The establishment of an accrediting agency offers much promise as an aid in solving some of these difficult problems and it may well be that this is the effective measure that is needed. Opinions concerning accrediting agencies, however, are far from being uniformly favorable. Some leading educators definitely oppose them. President Eliot of Harvard, years ago, wrote a pamphlet entitled *The Curse of Standardization*. Chancellor Capen of the University of Buffalo, who served as a member of the Grading Committee, has repeatedly voiced his opposition to such an organization, though it is reported that he has said that the North Central Association is the best among them because its standards were constructed with great care and were liberally interpreted and the Association was always willing to revise them.

The objections to accrediting or standardizing agencies may be listed under three headings:

1. Standardization is not good for education. It tends to discourage experimentation and restricts the activities of pioneering individuals. It has often a repressing effect, retarding the growth and development of institutions and ideas. The weaker schools which need greatest stimulation are content to comply with minimum standards and not bestir themselves to rise above such minima.
2. Prescribed standards have never been tested scientifically. Usually they are formulated only upon the best judgment of individuals and such judgment may be quite at fault.
3. Standards deal with the machinery of education, not with the product. They are designed to measure the institution, not to measure education.

In the recent revision of its procedures, the North Central Association has endeavored to overcome these objections. A most careful study has been made, and, instead of rigid standards, a statement of policy has been published and procedures have been adopted that provide for flexibility and fluidity. Under this procedure the college or school that is admitted to membership will be stimulated to exert continual effort to improve its educational practices. This revision of method may be regarded as a definite step forward in the evolution of accrediting procedures that will ultimately measure an institution's excellence by measuring the achievements of its students. The program of this Association, in my opinion, removes to a large extent the objections that have been voiced against such agencies. The old plan of prescribing rigid minimum standards served its purpose but is now obsolete. No one can measure the great good that has resulted from the activities of the North Central Association or the Council on Medical Education of the American Medical Association.

Nursing, like medicine, has available at least one measure of the effectiveness of its

schools. I refer to the results of examinations conducted by the state boards of nursing examiners. If, as did the Council on Medical Education in the beginning and as it continues to do, some central agency could obtain and publish a compilation of these results, it would soon have a wholesome effect. Because of political interference it is not unlikely that many state boards would hesitate or refuse to publish such data themselves, but there should be no difficulty in obtaining the information through state nursing organizations. Even the state organizations might be unwilling to publish the data but there should be no such compunction on the part of a national body. The information would soon filter through to the territory of the local school. Students would shun the school whose students failed regularly and in large percentage to pass the examinations and, as was the case in medicine, such schools would either improve their teaching or close their doors.

In addition, I urge strongly that the nursing profession earnestly consider the establishment of an accreditation system for its schools. A move in this direction has been made through the organization of the Association of Collegiate Schools of Nursing. This body, however, limits its membership to schools of nursing associated with approved colleges and universities and it is not suggested that there be any change in this connection. Some of the collegiate schools are such in name only and this association should exercise great care in admitting schools to membership.

While I share the hope and belief of those who are of the opinion that all nursing schools should be integral parts of colleges or universities, it is obvious that that goal cannot be quickly attained. It will require years of arduous effort for such achievement. The organization of an accrediting agency need not be an obstacle to such attainment, however, but rather, through the years, may well lead to that end.

In the National League of Nursing Education, it appears that nursing has an agency that could well develop the mechanism for accrediting its schools. While membership in that agency is on a personal basis, an institutional division might be established. If, however, this appears not to be feasible or desirable, then it seems that, following the example of the North Central Association, a comparatively small group of the best noncollegiate schools could form an association for their mutual betterment and through the prescription of qualifications for membership soon develop a wholesome influence upon all nursing schools. The recognition of such an association of nursing schools by the various national nursing organizations and their active cooperation would stimulate schools to apply for membership and soon enhance the power and effectiveness of the association. A deliberate development and growth, especially in the first few years, would be far better than an endeavor which sought quickly to evaluate and approve or disapprove the large number of nursing schools that still exist.

The establishment and development of such an accrediting agency need not be an expensive undertaking. The task is not an easy one, but I believe the splendid women who have worked so long and earnestly for the improvement of nursing education would gladly give their time and energy for so worthy an enterprise. The work must be done by those

actively engaged in nursing education. It cannot, with safety, be delegated to those in other fields, skilled and competent though they may be, for actual experience in nursing education and an understanding of all its peculiar problems and situations are essential.

It requires time and effort to develop wise policies, standards, and procedures. Investigation and experimentation are essential. It may be well to adopt some if not all of the principles that have guided other accrediting agencies, but it would be unwise to copy their procedures without careful study and assurance that they were applicable to the nursing situation. Much of the preliminary work has been done. The data furnished by the Grading Committee reports, the *Activity Analysis of Nursing*, and a number of other studies and analyses of the duties and responsibilities of the graduate nurse provide much of the material necessary for the development of a sound policy concerning the conduct of nursing schools.

It is clear that there can be no adequate reason for continuing the schools which are obviously bad or that cannot comply with the most meager of qualifications. Schools dependent for their practical instruction upon hospitals with so small a number of patients that it is impossible to give the students adequate instruction in nursing procedures or permit them to study the various types of patients or diseases should be closed. The Grading Committee would close schools in hospitals having less than fifty patients but I should prefer to see that number doubled.

If the measures that have been suggested were adopted by the nursing profession a long step forward would have been taken. The pace of improvement in the nursing schools would be greatly accelerated. Such measures would, I believe, furnish the stimulus and guide needed for the further development of nursing education leading to the professional plane upon which rightfully it should be conducted.

6. Statement of Policy for the Accreditation of Schools of Nursing, *by the Committee on Accrediting, National League of Nursing Education**

Eligibility for Accreditation. The National League of Nursing Education through its Committee on Accrediting will accredit and place on a published list schools of nursing and/or departments of institutions offering programs for professional education in nursing which are judged to be of acceptable quality in the matters defined later in this statement of policy. In addition, limited accreditation will be open to affiliating schools offering courses of instruction in one or more clinical services and to schools offering courses for graduate nurses in clinical work. Eligibility for accreditation will be based on the characteristics of the school as a whole.

Purposes of Accrediting. The purposes of the National League of Nursing Education in the accrediting of schools of nursing are as follows:

* Adapted from *Statement of policy for the accreditation of schools of nursing*, New York, National League of Nursing Education, 1939.

1. To stimulate through accrediting practices the general improvement of nursing education and nursing practice in the United States.
2. To help those responsible for the administration of schools of nursing to improve their schools.
3. To give public recognition to schools that voluntarily seek and are deemed worthy of accreditation.
4. To assist in guiding prospective students in their choice of schools of nursing through the publication of a list of accredited schools and by the same means to assist secondary schools and colleges in their vocational guidance programs.
5. To serve as a guide to state boards of examiners of nurses in further defining their standards for the recognition of schools and to promote reciprocal relations in the registration or licensure of nurses for practice.
6. To make available to institutions admitting student or graduate nurses to advanced standing, information that will help in evaluating professional credentials.
7. To provide information that may be made available to lay and professional groups for the purpose of developing an understanding of the ideals, objectives, and needs of nursing education.

Bases of Accrediting. A school of nursing will be judged for accreditation in terms of its stated purposes and upon the basis of the character and general excellence of the school as a whole. Superiority in certain areas may be considered as offsetting to some extent limitations or defects in others. The data upon which evaluations will be based will be both qualitative and quantitative in character. No school will be accredited without being surveyed by a person or persons authorized by the Committee on Accrediting.

Eligible Institutions. To qualify for accreditation, a school that offers a basic course or affiliating courses must meet the requirements of the board of examiners of nurses in the state in which the school is located, for admission of its graduates to the examination for registered nurse. The school must be incorporated or must be a department of an incorporated institution. The hospital with which the school is connected should be a public service institution. A school to be accredited must have been in operation for a sufficient period of time to judge satisfactorily the operation of its program.

Organization. There should be a governing body the members of which appreciate the special responsibilities involved in the conduct of a school of nursing as an educational institution and assume responsibility for the promotion of its interests.

Finance. The school of nursing or the institution that conducts it should have financial resources adequate to forward its educational program on a professional level and in accordance with its stated purposes.

Faculty. The school of nursing should have a faculty competent to meet the requirements implied by the aims and purposes of the school. The faculty should be well organized and working under satisfactory conditions. The faculty should consist of all those who have a substantial share in the teaching of students and in the formulation of the educational policies of the school. Among other factors the competence of the faculty will be

judged by their general and professional education, professional experience, breadth of professional and general educational interests, and demonstrated ability. Membership and participation in nursing organizations will be noted.

Consideration will be given to the number of faculty members in proportion to the number of students. Each faculty member should have special preparation in the field of her instructional duties.

Faculty organization should be such that all members share in the work of the school as a whole, participate in meetings, and contribute to committee work. The plan of organization and educational advancement which is shown to be a direct outgrowth of the work of faculty committees will be noted. The regularity and frequency of meetings as well as the subjects discussed as revealed by records will be examined.

Conditions of faculty service should be such that effective functioning is possible. The contributing factors which will be considered are salary status, tenure, service load, health program, aids to faculty growth, and other conditions which have direct bearing upon teaching efficiency.

The faculty should be responsible for the development and administration of the curriculum.

Students. The policy of a school in selecting and promoting students should be based upon its purposes and upon the ability of the students to participate in and profit by the program of the school. In evaluating the practices of a school in the admission of students, attention will be given to the requirements which are made in general education, age, health, and personal qualifications. Techniques of selection will be examined as to the administration of the stated entrance requirements, use of psychometric tests, personal histories, personal interviews or similar devices, and as to the introduction of students to the life and work of the school. Attention will also be given to the means employed by a school in furthering the scholastic, professional, and social development of individual students, in counseling students about their health, extra-curricular activities, and personal problems.

Curriculum. The curriculum should include all learning experiences implied by the stated purposes of the school. It should be in line with the best professional thinking and with good educational practice. The instruction should be planned on a professional level. It should not be of a strictly technical type. *A Curriculum Guide for Schools of Nursing* of the National League of Nursing Education indicates best practice.

The materials for the nursing curriculum should be selected on the basis of their social importance in helping the nurse to meet the needs of the people she is to serve and their psychological value in helping her to master the essentials of her profession. These materials should provide for an understanding of scientific and technical principles, a command of the specialized skills and techniques, and a development of the moral and social attitudes, ideals, and professional standards of conduct that are demanded of nurses. These should be classified and organized in such a way as to promote effective and economical learning and the greatest possible measure of integration.

Adequate time should be provided for instruction and study as well as for the students'

clinical experience and for proper rest and recreation. The time allotted to the program of instruction should be distributed according to the relative importance of the different courses and the emphasis that needs to be given to each group to secure a balanced preparation for the profession of nursing.

Appropriate and effective methods of teaching based on sound educational principles should be planned for every course in the curriculum, such methods to be adapted to the purposes and content of each course and to be consistent with the aims and principles controlling the curriculum as a whole.

Clinical Facilities. Experience should be arranged for all students in those services which are necessary to prepare them adequately for the practice of professional nursing. Investigation will be made to determine the acceptability of the provisions which have been made for experience in medical, communicable, surgical, obstetric, pediatric, psychiatric, and out-patient departments, and in public health agencies. Affiliations for some of the clinical instruction and practice will be accepted, provided a substantial portion of the experience is given in the home school. Affiliations must be approved by the Committee on Accrediting.

The hospital with which the school is associated should be approved by the American College of Surgeons and registered by the American Medical Association. Mental hospitals approved for affiliations should be approved also by the American Psychiatric Association. Public health agencies should meet the recommendations outlined by the National Organization for Public Health Nursing as providing a satisfactory educational program.

In determining the acceptability of clinical services for student experience, both quantitative and qualitative data will be obtained and examined. The following points will be considered:

1. Activity of the service, variety of conditions and segregation of patients, distribution of patients throughout the year, and availability for instruction.
2. Average hours of nursing per patient.
3. Amount and quality of the supervision provided.
4. Organized teaching program.
5. Stabilization of nursing service by means of a permanent group of graduate general staff nurses and other workers.
6. Physical facilities for nursing and teaching.
7. Character of the nursing service on the unit in question.

The Manual of the Essentials of a Good Hospital Nursing Service suggests measures for evaluation of a nursing service.

Library. The library should provide an adequate number and variety of books and materials on every subject included in the educational program of the school. Regardless of the size of the school certain basic books and periodicals should be available. The number of duplicate copies will depend upon the enrollment and other factors pertinent to the individual situation. Among other factors the adequacy of the library will be determined by the provision of authoritative and accepted text and reference books in the various fields of

study, books for recreational reading and general culture, and the selection of current professional journals and periodicals.

Books should be accessible, and someone competent in library work should be assigned to guide students in the use of the library and to give assistance to the faculty. The methods and devices employed to stimulate use of library facilities will be examined as well as the effectiveness of these techniques.

An annual budget should make provision for the employment of a competent person for full-time or part-time administration and supervision, for purchase of new books, periodicals, professional journals, and new equipment.

Physical Facilities. Space and equipment essential to the efficient operation of the school should be available for classrooms, laboratories, offices, and library. Adequate provision should be made for the housing of students and personnel and for the recreational activities of the school.

Adequacy of the number and size of classrooms will be determined by the student enrollment and the organization of the school. Attention will be given to their location, lighting, ventilation, and teaching equipment. The wards of the hospital, which serve as the laboratories for clinical experience, should be accessible to the school and should be equipped so that good nursing care can be given, the health and safety of the students safeguarded, and adequate teaching made possible.

The housing and living conditions should provide students with comfortable and attractive rooms suitable for rest, relaxation, and study. Conditions should be such that mental and physical health will be safeguarded. Facilities which permit the socializing experiences necessary to the student's development are essential.

Student Health Service. A health program which provides for preventive and remedial service and helps the student to integrate health knowledge with actual living should be in effect. The health program should begin with careful selection of students from the standpoint of health, both mental and physical, and should be carried on as a continuous service throughout the student's entire course. In addition to admission and periodic physical examinations this service should make provision for preventive inoculations, correction of remediable defects, hospital or infirmary service during minor or serious illness. Hours of work, rest, recreation, vacations, housing, and provision for dietary needs should be such that the principles of healthful living may become a vital part of the life of the student.

Records. The school should have available up-to-date and comprehensive records of students, faculty, alumnae, and graduate nurse personnel as well as reports and minutes of meetings. The records of the students should contain data accumulated before admission and continuously throughout the course. Records of the graduates of the school should be on file and available at all times.

The school should have available records of the general academic and professional education as well as the experience and personal history of all faculty members and graduate nurse personnel. Periodic evaluations of efficiency should be made and added to the personal file of each faculty or staff member.

Through reports of the principal and the governing council a complete record of the growth of the school should be available. Reports of committees and minutes of meetings should supply more detailed information concerning the activities of the school.

Administration. The type of administrative organization in effect should make possible the achievement of the aims and objectives of the school. In evaluating the administration of a school consideration will be given to the manner in which functions are performed as well as to the organization and competence of the personnel. Special attention will be given to administrative methods, budgeting, recruiting of faculty personnel, administration of the curriculum, provision for student personnel services including admission, counseling of students, government, housing, recreation, health programs, and records.

The administrative policy of the school in relation to the study of its procedures and problems will be considered.

The Published List of Accredited Schools. A list of accredited schools will be published as soon as the first series of surveys has been completed, and annually thereafter. The name and location of the school will be given as well as a brief descriptive statement of the characteristics of the institution.

Policy in Relation to Criteria of Evaluation. In order to realize the fundamental purposes of accreditation, certain data will be requested annually from all accredited schools. These data, as well as facts gathered on succeeding surveys, will provide the basis for substantiating the criteria of evaluation or for revising them.

7. The Hospital and College School of Nursing or the Nursing School of Tomorrow, by Sister M. Berenice*

WHAT is the difference between a collegiate school of nursing and a hospital school of nursing? A collegiate school of nursing is one conducted by a college or university. A hospital school of nursing is one that belongs to a hospital. It seems reasonable to require all schools accepting only high school graduates to use collegiate standards, whether the school itself belongs to a college or a hospital. Such a school has the education of nurses as its primary aim. It attempts to offer them the best possible basic preparation in theory and practice for their profession and sufficient cultural content to develop a symmetrical individual able to enjoy an enriched life.

Though a school with collegiate standards might be conducted by either a college or a hospital, there seems to be no more serious reason for a hospital to conduct a nursing school than to conduct a medical school. However, the fact remains that we are accustomed to the idea of hospitals conducting nursing schools. Hundreds of them exist throughout the country and it is undoubtedly true that some nursing schools conducted by hospitals are far superior to some nursing schools under the auspices of colleges. Furthermore, to revolutionize the present order of things may not be expedient just now. In any case, it is not advisable to do it hastily. If done at all, it ought to be done carefully, each step being taken most deliberately.

* Adapted from *Hospitals* 10:29-35, June 1936.

Perhaps the greatest advantage of a separation of hospital and nursing school would be to make absolutely clear to all concerned that the school of nursing is an educational institution. Many of us know, in so many words, that the aim of the school should be educational; but to some of us this fact is merely a phrase; we read it, we hear it, but we do not grasp its import. It is undoubtedly all right for the nurse educator to have one eye on the education of the nurse and the other on the service of the patient, if she understands that, beyond a certain point, her main business is either the education of the nurse or the service of the patient and that a hundred per cent student staff is not able to accomplish both objectives even if the director is a genius in administration.

The fully prepared graduate nurse should be prepared to fulfill satisfactorily the following tasks: (1) bedside nursing when the patient is critically ill or requires skilled service, including the use of complicated appliances; (2) the public health worker whose field is wide and whose services are varied, requiring a person of culture, good judgment, and considerable ability; (3) the nurse educator and administrator who educates or supervises student nurses, graduate nurses, attendants, or a combination of these groups.

This latter type of nurse includes a large number of workers in the hospital, such as head nurses, supervisors, teachers, directors of nursing service and of hospital schools of nursing, as well as all those in teaching or administrative positions in other health agencies.

It seems to be generally conceded by the best-informed nurse educators that a subsidiary worker might well be utilized for simple, routine, non-nursing services in the hospital with a very active service; that she might be permitted to perform the ordinary simpler nursing services, under supervision, in the institution caring for the chronically ill; and that in the home she can be used to care for patients who are chronically ill, disabled, or convalescing, performing certain home-keeping functions in addition. In every type of service, she ought to be controlled, directed, and assisted by the fully-prepared professional nurse.

If we accept the two types of workers, the highly skilled nurse and the attendant specifically trained for the simpler functions, there seems to be no good reason to object to a collegiate education for the professional registered nurse and we may return to our consideration of the nursing school and what it ought to be.

What are the means of attaining the aim? A good curriculum, first of all; good administrators, to see that it is carried out; good teachers, to interpret the content and give it to students in the most effective way. The content must include sufficient foundation upon which to build the basic professional structure; a nice balance of theory and practice; and enough cultural influences to develop the woman as well as the nurse.

The next question may well be, "Can the hospital conduct a school of nursing with collegiate standards?" It doubtless can if it recognizes, first, that a school is one institution and a hospital another; that the school is primarily for education, the hospital for service. Neither has any right to expect the other to put aside its major aim.

Second, the hospital should insist that each institution have its own budget and separate financial accounts. There is no particular reason why the hospital should support the school; it has quite as much right to object as did the school to supporting the hospital.

Who then ought to stand the burden? Either the nurse herself or the public. The hospital of course ought to remunerate the services of the student at a fair rate, in the form of either maintenance or cash, provided the student is actually rendering service.

Third, the hospital must supply a good faculty for the school, and all persons concerned with the teaching or supervision of students in the hospital must be properly prepared for their tasks. This, of course, is expensive and may be almost sufficient remuneration for the student's services.

Fourth, the hospital must provide for the proper rotation of services and this means a shifting group of students who will probably be transferred to another department just about the time they have become sufficiently acquainted with the work to be of real service.

Fifth, the hospital must provide for the care of the sick, its primary responsibility. It can hardly hope to do this with its floating population of students whose series of services is gauged by *their* needs, not the needs of patients. This makes it necessary for the hospital to provide a graduate staff sufficiently large to supplement and stabilize the student group so that neither patients nor students suffer from lack of proper consideration. Please do not interpret this to mean that the hospital should not depend upon the student for any service. Personally, I am greatly in favor of depending upon them as much as circumstances will permit; I believe that this provides an invaluable incentive to the student and that it would be a great mistake to eliminate it. It is so much more stimulating to work for real ends than to practice for imaginary ones. However, if some who disagree with me insist that the student must never be depended upon for service—must always be extra in a department already fully staffed—then, certainly, the student, not the hospital, ought to pay for the privilege of practice in the hospital, just as she pays for the privilege of practice in the science laboratory.

Sixth, the hospital is obligated to see that the student's course is sufficiently good to deserve the maximum amount of credit any college will allow for the nursing course.

If the hospital conscientiously provides in this manner for the school, it is certainly doing a nice piece of work, and, even though certain individuals may wonder why the hospital has made itself responsible for such a burden over and above its own definite responsibilities, they cannot justly object to such an arrangement.

The preceding discussion should indicate that a very distinct separation between hospital and school is desirable and really necessary for the welfare of the school, yet this separation or distinction must be accompanied by a very close connection, necessitating an unusual degree of cooperation between the administrators and educators in the school on the one hand, and the supervisors and instructors who assist the students in meeting their hospital problems on the other. It means that school and hospital must thoroughly understand and sympathize with each other's aims. It is a case of teamwork with both pulling together in perfect harmony, no easy task in the midst of the strenuous exertions and numerous emergencies of hospital life.

Should the nursing school belong to the college or university rather than to the hospital? This seems the more logical arrangement, since the college, being already an educational

institution, is remaining quite within its limits, at least in the modern American interpretation of college functions, when it undertakes to educate nurses. However, the college may know far less than the hospital about the actual needs of the nurse. It may err as much by overemphasizing theory as the hospital by exaggerating the practical aspects. It is obligated, quite as much as the hospital, to provide a well-prepared faculty—not merely a college faculty but a faculty of nurses who know the business of educating nurses quite as well as the college professor understands his obligations to the college student. If it accepts the obligation of educating nurses, it must see that arrangements are made with one or more hospitals for proper rotation of services and for well-prepared courses in the theory of nursing, preferably given at the hospital rather than at the college and correlating as closely as possible with the practice. It must either supply well-trained teachers to direct and supervise the practice of the students, or remunerate the hospital for the time its well-trained personnel spends with students. The hospital in turn should remunerate the student or the college for the services rendered by the student, if she renders any.

Unless the college looks into the whole matter as carefully as does the hospital desirous of conducting a good school, it too will make many mistakes, though its mistakes may be of a different type. A college that believes it fulfills its obligations to a nurse by supplying her with courses in theory, but which fails to set any standard for her practice or to arrange for its proper supervision, may do a far poorer piece of work than many hospitals have done in the past. So you see we cannot merely heave a sigh of relief and cast our burden upon the shoulders of the college. The college needs the nurse educator quite as much as the nurse educator needs the college. We must think and plan together, whether we become part of the college faculty or part of the hospital personnel.

There are several plans for collegiate schools now being used more or less experimentally.

Plan 1. This plan has been in use for some years. Graduate nurses who have completed the usual course in the nursing school may desire to complete the courses necessary for a professional degree. They may receive from thirty to sixty college credits for their nursing course. Two or three additional years of college qualify them for a professional degree, usually a bachelor of science in nursing or in nursing education. Sometimes the college courses include advanced professional (other than basic) courses and sometimes they do not; but they certainly should be included if the nurse has had experience and desires to qualify for advanced positions. The weakness of this plan lies in the fact that the graduate nurse has usually had an insufficient amount of science and other course content; the college must then set about supplying deficiencies—patching up, as it were—though we usually state it more politely and talk about “rounding out” her course! The great attraction for this type of course lies almost entirely in the fact that the graduate nurse after working a while is usually financially better able to go to college than she was when she graduated from high school.

Plan 2. This is a combined academic and professional course. Students enter a college school of nursing or a hospital school affiliated with some college; they may spend one,

two, or more semesters at college, then two or two and one-half years in the theory and practice of nursing; finally, one or two more semesters of college work complete their five-year course and render them eligible for the professional degree. This curriculum is apt to be much better integrated than that of the preceding plan.

Plan 3. This may be similar to Plan 2 except that the course covers a period of four calendar years instead of approximately five, as outlined for Plan 2. It may also differ in that all the college work is given first, instead of postponing a portion of it until the nurse has had her rotation of services. Here of course the danger lies in slighting certain aspects of the curriculum, either theory or practice, professional or cultural courses.

Plan 4. In this instance the hospital school of nursing rather than the college school demands one or two years of college work previous to entrance and provides that its nursing course will receive the equivalent of one or two years of college credit. Going to college for a year or two and then entering a school of nursing may have advantages, but it also has disadvantages. If the whole is not planned in advance, the college work, while providing a cultural background, may fail entirely to prepare the student for her nursing course. After she has completed her nursing course and spent four or possibly five years in school, what has she, so far as a degree is concerned? If she wishes to obtain one, where shall she obtain it, and in what length of time? Probably not without the expenditure of another year of time, making the entire course five or six years, at least. If the content of the two years of college is carefully planned and arrangements made for college credit for the nursing course, these objections disappear.

Plan 5. The student finishes college, obtaining a bachelor of science or of arts degree, then enters a school of nursing. If only college graduates are admitted, the course may be specially planned for young women of her maturity and preparation. However, since college courses vary greatly in content, the course in nursing may overlap the college course of some students and fail to bridge certain gaps in the case of others. The student's main objection to this plan is of course the length of time required and the cost, though it is desirable for the nurse who need not consider these details.

It seems to me that no collegiate school of nursing, except one dealing exclusively with the graduate experienced nurse, should plan to send forth nurses equipped not only with the basic course but presumably ready to step into teaching or administrative positions. No matter how well prepared such graduates are in theory, they lack the experience, the practice, the ripened judgment and nice balance which only moderate maturity in years and in the profession can give to the majority of nurses. Teachers and supervisors have a profound effect upon the ideals and activities of their pupils; they must be able to give them the fruit of the wisdom they have garnered from experience, not merely that stored up in books and passed on as second-hand information by them.

Now, perhaps, we are ready for the question: "How shall we set about developing our school into one of the collegiate type?" My first suggestion is to pick your way slowly and carefully. Study your situation and decide whether you wish to develop a hospital school with collegiate standards or a collegiate school. If the latter and if the college in which you

are interested is at some distance, the situation must be handled somewhat differently than if it is in the same town. Becoming *affiliated* with a college means retaining your own complete identity as a separate school; *integration* means becoming a part of a college. Arrangements with a university differ somewhat from arrangements with a college. If you cannot yourself come to a decision about these matters, call in expert assistance and insist upon knowing the whys and wherefores of the whole scheme before you agree to any proposed plan. See it clearly and understandingly from the very beginning, even though you must delay the beginning for a while in order to clarify your vision. Then study the various types of programs offered and decide which one seems best for your particular locality, opportunities, or needs; modify it if necessary. Study the Association of Collegiate Schools of Nursing; the aims, standards, constitution and by-laws. Figure the financial aspects as accurately as possible and if you are assuming a financial risk, find out what it is and decide whether you can safely carry it.

Do not act in haste and repent at leisure but plan your organization step by step, slowly and deliberately; see first of all that a properly prepared faculty is at hand, in preparation, or easily available; be sure too that there is reasonable hope of securing applicants of the type and preliminary preparation you desire. After all, a school is composed primarily of students and faculty, both important, but the students ranking first. Everything else is secondary though possibly important; it includes the machinery to get it properly started and to keep it going and the building and equipment necessary for housing, etc. Determine, obstinately if necessary, that you will have a good school. Armed with all these aids, you are almost sure to succeed in the venture; but if you fail, your failure will surely be much more worthy of you and your ambitions than success in limping along (however secret the limp) with a crippled school at your heels.

If the nursing school is conducted by a religious community, the hospital and school both belong to the community, naturally, but the hospital is probably in all or nearly all instances responsible for the financial support of the school. There is no particular reason, of course, why it should be, unless students render sufficient service, or a combination of service and tuition, to pay for their education. The religious community may also have a college in the vicinity; the question then may be whether the school should become part of the college or part of the hospital. I should suggest making it a part of the college, but co-operating, as before recommended, most closely with the hospital. The nurses' residence, occupied only during the period of nursing theory and practice, may advisedly remain on the hospital grounds and the purely nursing courses may well be taught in classroom and ward, rather than at the college, while the student is having her rotation of services. Should affiliations for certain nursing services be established with other hospitals, a similar arrangement is advisable; i.e., having the students reside near the hospital and receive the theoretical nursing courses in both classroom and ward while obtaining the necessary practice in the hospital.

We have explained what we mean by the hospital school of nursing, the collegiate school of nursing, and the nursing school with collegiate standards, emphasizing the importance

of the latter. The need for two types of workers, the well-educated, fully prepared professional person and the subsidiary worker, has been discussed, with the place to be occupied by each clearly marked off. We have pondered deeply though briefly upon the major aim of the nursing school and the means of attaining it. The importance of sending forth well-prepared nurses, not merely educated women, has been emphasized. The obligations of the hospital to the school and of the school to the hospital have received some attention. The pros and cons of a collegiate school of nursing rather than a hospital school have been brought forth. The several types of college schools of nursing now in existence have been briefly considered and their respective weaknesses and strengths pointed out. Then an effort was made to indicate how one might go about developing a school of nursing of collegiate standards.

Now why all this? We seem to be in a transitional stage; perhaps in ten or twenty years the nursing course will have become a professional course in the college and the hospital school will have ceased to exist in all the largest centers of the country. Instead, the hospital will have opened its doors as a laboratory to students and given its best administrators and teachers to the college, while the college will have learned fully to appreciate that which the hospital and only the hospital can offer—the human beings to whom the student ministers and, in ministering, learns to become a good nurse. Who knows? I am sure that I do not. But the course of events has a way of slipping up behind and pushing us along sometimes much faster than we ourselves had any intention or desire of going. And if this happens, we do not want to be stunned by the push or dropped on the wayside. We want to know where we are going and why and how.

8. What Is the Educational Responsibility of State Boards? *by Ada R. Crocker, R.N.**

IN 1900 new training schools (as they were then called) were being established rather rapidly in all kinds of hospitals and the instruction varied greatly in both quality and quantity. Graduate nurses were often required to work side by side with so-called nurses who had little or no preparation in nursing. It is not strange that the public confused the competent nurse with the incompetent and sometimes directed criticism which seemed quite unjust to the nursing profession. It was generally believed by members of the profession that through legal regulation the public would be safeguarded and the graduate nurse identified and protected. Seven years later sixteen states had laws regulating the practice of nursing and Sophia Palmer stated, "the quality of nursing service in every kind of institution for the care of the sick and insane has changed for the better since registration agitation began."

Even though all states now have laws providing for registration, the struggle for better legislation continues. The objective does not change. Whenever one reads or hears discussions on nursing legislation, the plea for higher standards of education and experience, as

* Adapted from *Hospitals* 10:65-68, Mar. 1936.

well as for more rigid control over those who nurse for hire, is for the sole purpose of providing a professional service acceptable to the public. Important features of these laws include standards for accredited schools of nursing, registration requirements and fees, membership, appointment and powers of examining boards, and provision for penalties for infringement of the law. A study of nurse practice acts shows that administrative authority is vested in various groups including the state board of nurse examiners, the state department of health, the state department of education, the department of public instruction, the state medical board, and the state department of registration. However, in the largest number of cases, the official body is the board of nurse examiners.

The appointment of well-qualified nurses on this board is exceedingly important. In some states the selection is made from the list of candidates submitted to the governor by state nurses' associations. This plan can be endorsed only if the association has carefully considered the personal and professional qualities of the nurses whose names are submitted. Elizabeth Burgess explains that "there are no approved qualifications, but certainly nurses to be on the Board should be registered under the law and should have been a sufficient number of years in the practice of nursing to know the needs of the profession. They should know the needs of a good school and be qualified for the work they are to do."

The law is based on minimum standards. The requirements in many instances are very low and one wonders if nurses whose qualifications are scarcely above the minimum are really safe to care for the sick. A frank and critical examination of the statute and a sympathetic attitude toward changes in the law to improve standards are necessary in order to meet the challenge of the public for effective and competent nursing service. Clara Queureau, secretary, New York Board of Nurse Examiners, suggests that an attempt be made to enact laws which have a higher degree of uniformity. Not that there should be rigid standardization but rather a general acceptance of principles upon which laws might be based. The chief value of the nursing law, states Adda Eldredge, is that it gives the machinery and the funds for the educational work of supervising and advising the schools of nursing. She also believes that requirements for the schools should not be too specific, to take from the schools opportunities for experimentation which also may mean the curtailment of interest in newer trends of thought.

I have called attention to the opinions of nursing leaders who have had years of experience in administering state laws. You will gather from these remarks that nothing ideal has as yet been accomplished. However, through the courageous efforts of pioneers in this field a foundation has been built and plans for an appropriate structure are slowly developing in the hands of the designers. The structure must be suitable in style, must meet certain measurements, and must be built economically to meet the needs of society and also the needs of the nursing profession. The designers have aided directly or indirectly with the "research work" of the Grading Committee; they are studying policies and programs of standardizing agencies and, as a broader concept of nursing education is presented by the National League of Nursing Education, the essential factors or elements of this structure will be assembled into a component whole. Consultants who are assisting include spe-

cialists in all fields of nursing and representatives from the fields of medicine, general education, and hospital administration.

Miss Eldredge reminds us that much can be accomplished with what we have if we will use it. Educational responsibilities of the Examining Board cannot be recognized unless members of that board have a broad understanding of the needs of the profession. These needs change in keeping with changes and advances in medical and hospital service and in the general health programs of the country. Perhaps, then, we are justified in saying the first requisite for an educational program is that board members possess such personal and professional qualifications as will enable them to give intelligent guidance in matters relating to the improvement and advancement of nursing. The first educational responsibility is setting standards for schools of nursing. The statute provides the minimum but that does not prevent the board from recommending higher standards which may be recognized eventually as basic requirements for professional preparation. Such matters as age and preliminary education of students, theoretical and clinical opportunities, housing and classroom facilities, qualifications of faculty, and reputability of the hospital are considered when accrediting a school of nursing. The most satisfactory way to secure information relating to the above points is through a visit to the institution.

A study made for the League of Nursing Education Committee on State Board Problems reveals that nearly three-fourths of the states have regular inspections once each year. Slightly more than half of the states reported that they accredit their schools only once, but make periodic visits to determine the school's eligibility to remain on the list. In 49 per cent of the states accreditation lasts for only one year and all schools must be re-accredited every twelve months. The amount of time spent in inspecting a school varied greatly. Five states reported never spending more than a few hours in a school, whereas another five states reported spending from four to seven days on each inspection. The study includes facts relating to teaching facilities and records, living facilities, inspection of ward practice, observation of classroom instruction, and inspection of affiliating schools. In all but two of the reporting states, the inspector always makes a report of her survey of each school to the state board. Usually the report is presented in writing. In 73 per cent of the states, the report which is returned to the schools is a summary of what the inspector found at the school with such recommendations as seem necessary. Sometimes these recommendations are discussed with the director of the school but in fourteen of the states no conference is held. In three-fifths of the states, follow-up inspections are made to see that recommendations are carried out, in the other two-fifths they sometimes, but rarely, are made.

The interesting and revealing information compiled in this study is hopeful but also somewhat discouraging. If the function of the state boards is to supervise and advise it would seem necessary to have more uniform methods of administrative procedure. Hospital and school of nursing officials may resent the so-called inspection but surveys, conferences, and guidance are quite generally appreciated. One can readily understand a variation in the amount of time necessary to inspect schools, but just how much supervision and constructive guidance can be given if only a few hours are spent in an institution?

Possibly some of our very serious problems in nursing could be overcome if more time and thought were given to a study of conditions and opportunities in each school of nursing and the place of each school in the whole health program of the community in which it is located. This involves far more than a superficial visit through the hospital, the classroom, and the nurses' residence. It means a careful analysis of existing conditions and an unprejudiced interpretation of nursing needs of the community. A state-wide program of this character could not be accomplished in a brief period of time because all reforms are worked out very slowly. Hospital boards, hospital officials, the medical profession, nurses, and the general public must be convinced of the soundness of an educational program which will prepare the graduate nurse for the increasing demands made upon the profession.

These suggestions in detail may have been brought to your attention at various times by nurses' examining boards in your own state. Have you given them your full cooperation and support in the work they are trying to do? Have they been given an opportunity to discuss problems with members of your hospital board or school of nursing committee, members of the medical staff, and members of the faculty of your school?

This may or may not be necessary in your own opinion. From the viewpoint of the accrediting official it may be most important and of distinct value to all concerned. While the purpose of inspection is to determine the manner in which the school is meeting minimum requirements set by law, the results tend to stimulate the school to make self-surveys or critical analyses which may be used as a basis for experimentation, reorganization, and growth.

The Grading Committee urges that, in order to improve the quality of nursing which patients receive, the professional organizations do all they can to strengthen and improve the service which the state boards furnish to hospitals. Here again we recognize an educational responsibility of state boards. Reports of their activities and progress, including general trends as indicated through results of examinations for state registration, would be very illuminating and important information for the professional organizations. The assistance and cooperation of these organizations are available and very influential in promoting standards which will prepare the nurse to more satisfactorily carry out her professional duties. Their influence with legislative bodies to raise the requirements for nursing education and to provide funds for adequate supervisory service should not be overlooked or underestimated. A close and harmonious working relationship is essential in carrying forward plans for erecting the type of structure which will more adequately meet the health service needs of the community.

9. Duties and Training of Ward Helpers, by *Ruth Pollock, R.N.**

THE introduction of ward helpers to the hospital organization should prove beneficial as well as economical. Studies have proved that 55 per cent of the work being done in the

* Adapted from *Hospitals* 12:81-83, Apr. 1938.

hospitals by nurses is nonprofessional in character, but professional salaries must be paid. Trained nurses should do professional tasks under professional conditions for professional recompense. The ward helper relieves the trained nurse of the burden of routine duties, thereby reducing operating costs. She offers a valuable service to the patient as an employee of any hospital.

Depending upon the situation, ward helpers may also be classified as nurses' aids, nurses' attendants, or subsidiary workers. Their work offers a new vocation or occupation for educated and intelligent women without any technical training. It supplies to them an immediate livelihood without any long-drawn-out period of preparation. This work should appeal particularly to young women doing part-time extension studying evenings, as it furnishes them with money and yet does not require outside work or keen concentration while on duty. It is also a method of occupying time to good advantage while deciding which course to follow in life. The helpers may prove themselves adept enough to want to train for nurses. The experience could almost be compared with the trial period now being used in many schools of nursing for testing adaptability, with the added attraction that workers are reimbursed for their services.

In situations where a large group of student nurses are rotated through departments, employment of ward helpers lends a certain amount of stability to the department. In hospitals where a strict salary budget system is organized, it allows the nurses to be fully paid for services that can only be given by technically trained people.

The National League of Nursing Education recommends distribution of these employees in the following manner. Orderlies are employed to fulfill the ratio of II.

I. On a women's ward of 36 patients: day, two ward helpers; night, one ward helper

II. On a men's ward of 36 patients: day, one ward helper; night, none

Small hospitals would find it good economy to abandon their training schools and employ only graduate nurses and ward helpers, thus raising the standards of the nursing profession by cutting to a minimum graduating classes of those hospitals whose organized budget system does not allow the best of teachers and affiliations. For the hospital, there would thus be a saving through the reduction of operating costs.

By appointment, each prospect has an interview with the superintendent of nurses or some authority designated for the duty of employing them. Preference is given to those possessing the best qualifications. They should be at least eighteen years of age, high school graduates, and in good physical health. Those proving themselves good workers after a trial period are placed permanently on the list of hospital employees as ward helpers.

These ward helpers receive thirty to forty dollars a month with full maintenance and laundry. Single rooms and meals with the nurses in the dining room are enjoyed. They are given free hospitalization when ill. A designated type of uniform is usually worn after acceptance. Vacation of fourteen days annually with pay is recommended. If the personnel do not live in the hospital, attention must be paid to rest rooms, locker rooms, and toilet

facilities in well-lighted, well-ventilated rooms. A few comfortable chairs and couches should be provided to ensure happy and satisfied employees.

The duties of ward helpers differ in each situation. Some authorities claim that their services should stop at the bedside of the patient. Others feel that their field of usefulness is unnecessarily restricted by such regulations. The latter allow the helper to do nursing procedures that do not require knowledge of the underlying principles or any clinical judgment. When properly trained, observant individuals become conscious of the grave responsibility of being allowed to assist the nurse. Therefore, if ward helpers are properly trained and properly supervised duties which are nursing and yet not clinical in character certainly can be considered as within their field. I have seen this method used successfully in the Memorial Hospital, Morristown, New Jersey. However, if facilities for close supervision are not provided, it is safest to restrict their duties to nonprofessional ones.

The nonprofessional duties which can be learned and carried out by any helper are the following:

1. Attending to flowers
2. Delivering mail
3. Running errands, such as bringing supplies
4. Attending to empty beds and beds of ambulatory patients
5. Walking with patients in halls or wheeling them in chairs
6. Assisting the head nurse in making inventory
7. Accompanying the patients to the office on being discharged
8. Keeping the diet kitchen in order
9. Keeping the refrigerator in order
10. Preparing food trays for the patients
11. Carrying food trays to the patients
12. Feeding patients
13. Collecting food trays and scraping for maids
14. Passing all water and drinks by specific orders from the nurse in charge
15. Keeping the utility room picked up
16. Assorting and passing linen to each patient
17. Caring for bedside tables
18. Passing wash water and tooth brush mugs to patients
19. Assisting patients to x-ray and other departments
20. Cleaning and returning surgical supplies used

Ward helpers should not have contact with those patients who have any form of infectious disease. Their duties should be limited to those patients who are mildly ill or convalescing. Treatments of any kind should never be administered by nurses' assistants. There are some authorities who do allow them to do the following duties in addition to those mentioned. They are:

1. Giving baths
2. Caring for anesthesia patients under supervision
3. Rubbing backs
4. Taking temperatures, but not pulses and respirations
5. Giving cleansing soap-sud enemas

The ward helpers enter into the life of the hospital organization so closely that plans must be made for them very minutely. Many become haphazard workers because of lack of organization and supervision. To avoid any catastrophe, it should be emphasized that while they are all employees they are not professional workers. Often they are not prepared to assume their duties and must be carefully taught and then supervised. Some one person should be responsible for this. Two methods may be used. One is a group of classes conducted along with their work at a convenient hour, and then follow-up teaching by the head nurse of the ward. The other is teaching by the head nurse in charge. Of the two, I believe the first is preferable. No diplomas or certificates should be awarded.

The classes may consist of conferences, lectures, or group discussions on the following subjects in general:

1. Hospital etiquette
2. Personal appearance
3. Care of oxygen tents
4. Care of flowers
5. How to clean a bed after discharge of patient
6. How to make a closed bed
7. How to strip a bed
8. How to open a bed
9. How to make an anesthesia bed
10. Place of ward helper in the nursing organization, her relation to the patient and to the nurse and other members of the hospital organization
11. General appearance and condition of the ward at all times
12. Correct temperature of ward
13. Ventilation
14. Care of patients' possessions
15. Listing and checking clothes

Enemas, temperatures, methods of giving baths require class instruction, practice, and supervision when allowed. Definite assignments should be posted daily by the head nurse and follow-up check-ups done for constructive criticism to be offered.

Ward helpers are increasing in numbers and fast becoming a permanent factor in hospitals. Plans must be made for correct teaching and supervision. They should be made conscious of their limitations, to avoid them when going into practical nursing on the outside. Suggestions have been made at the league meetings that they, like all who work for pay, should be defined by law, and state registration and state licenses should be compulsory. In 1935 licensing was provided for subsidiary workers in ten states. The directors of the American Nurses Association feel that no formal courses should be provided unless provision is made for the control of them. Therefore no formal courses should be given unless the state controls them or the problem of the ward helper may become a menace to the patient, the hospital executive, the physician, and the public. Many hospitals have used ward helpers for several years. Supervisors and patients have spoken highly of them. Most head nurses feel that they are a great asset if correctly taught and supervised.

10. Nursing Costs, Nursing Service, and Nursing Care, by *Blanche Pfefferkorn, R.N.**

NURSING service is coming into its own. It is having a renaissance, or perhaps it might be more accurately said to be emerging from the rule of thumb to a level backed by scientific methods and facts. Today there is abundant evidence of recognition of the fact that the mere massing of patients, nurses, maids, and orderlies in a particular hospital unit, without due and knowing respect for such factors as the numerical relationship between patients and nurses, the qualifications of the different types of workers for their several responsibilities, and the physical conditions under which they work, represents an antiquated, unprogressive, disjointed kind of service that may not always provide a haven of safety for the patient.

It is my purpose to point out the interdependence of costs, service, and care. That we may establish common thinking in the use of the terms nursing service and nursing care, I shall define nursing service as a particular personnel operating in a particular physical set-up under particular conditions, nursing care as the product of the nursing service activities. The provision of nursing care which will serve best the well-being of the patient may be set down as an accepted and major purpose of a hospital.

The Cost Study made by the Committee on the Grading of Nursing Schools gave us no actual budget data on nursing service costs. But it did give us, which was much more valuable, an interpretative measure of the quality of the nursing service maintained by the hospitals participating in the study. Thus, for example, one of the hospitals, Hospital A, reported that it would be necessary to substitute two graduates and one maid for every ten students if it gave up its school and that it would save money by so doing; whereas Hospital B reported that it could replace every ten students by nine graduates plus two maids under the same conditions and would thereby lose money. If Hospital A's substitution were adequate then Hospital B would be overstaffing its service, and if Hospital B's proposal were reasonable, then Hospital A would be shockingly understaffed. Obviously, man power (or nurse power either) cannot be cut 70 per cent, as was proposed in the case of Hospital A, and the output remain essentially the same. When quantity is reduced below an accepted desirable minimum, then quality must inevitably suffer.

While the differences in staffing of the two hospitals discussed are sufficiently extreme to explain the cost discrepancies, there are other factors that require consideration for a valid comparison of the two institutions. Some of these factors are bedside nursing hours provided per patient, hours on duty of the staff, and the relationship of nursing personnel to subsidiary workers. Costs, nursing service, and nursing care constitute a mutually influencing set of factors, and to make a comparison of the costs of nursing service in different institutions without knowing in detail what goes into these costs is wholly fallacious.

During the last three and a half years my job has taken me into about three dozen hospitals—large hospitals, small hospitals; official hospitals in the sense of being operated by

* Adapted from *Hospitals* 10:32-37, Jan. 1936.

cities or states, unofficial hospitals operated by private governing boards; general hospitals, special hospitals; hospitals with schools of nursing, hospitals without schools of nursing. The time I have spent in these hospitals has extended from one day to two weeks, and the periods have covered both day and night. The purpose of my visit has varied in different institutions, but a major consideration in all instances has been an appraisal of the nursing service. Whether the hospital was associated with a school of nursing or not, the character of the appraisal remained essentially the same. Two of these institutions illustrate rather strikingly those factors which either militate against or make for good nursing care and which affect the costs of the service. Let us call one Hospital X and the other Hospital Y.

Hospital X had a daily average of 30 patients and maintained four services, surgical, medical, pediatric, and obstetrical. The hospital statistics disclosed that about 55 per cent of the patients were surgical, 30 per cent medical, 10 per cent children, and 5 per cent obstetrical. Thus, the patients cared for were largely of the surgical classification, with a negligible number in the pediatric and obstetrical groups. This hospital conducted a nursing school. Obviously, from a clinical standpoint, it should not have operated one. It offered a nice illustration of the relationship between hospital budgets and nursing education.

Three ward units were included in Hospital X, two located near each other where adult and children medical and adult and children surgical patients were housed, and a third for obstetrical patients some distance away from the first two. One graduate nurse supervisor was responsible for the three units. The ward nursing staffs consisted of student nurses, half of whom were still in the preliminary period. The head nurse on the largest and busiest ward was a student in the early part of her third year. Otherwise, the nursing service staff on this unit consisted of six student nurses, all of whom, except two second-year students, had been in the school but seven weeks, and a maid who gave about two hours of her time each day to the unit. On the day of the visit there were twenty-five patients in the ward.

Consider the staff as it functioned: the graduate nurse supervisor distributed bed linen, checked supplies, made certain routine inspections, and accompanied the physicians to the bedside of patients. She gave no attention to the instruction of the students or the care of the patients. Her duties apparently were limited to the managerial, housekeeping kind. The time of the student head nurse was occupied chiefly in recording orders, checking orders, writing up charts and reports, and assigning duties to the other students. One of the second-year students was on night duty. The other, on day duty, was engaged in giving out medicine, cleaning the medicine closet, assisting with dressings, and making surgical supplies. Thus, the serious and responsible business of giving bedside care to twenty-five patients devolved upon four untaught, untrained, unsupervised, and untried young preliminary students who were shockingly unprepared for their tasks. As an inevitable result of the shortage in maid time, all of the student nurses, and particularly the younger ones, were doing the ward cleaning and other duties of this character.

It was difficult to find out the hours on duty. However, from the information obtained and the observations made, it appeared that the day student nurses were on the ward nine

or ten hours and the night student nurses twelve hours. The ward was understaffed both day and night, there being but seven students, which number included the head nurse, for twenty-five patients, some of whom were seriously ill. Hands were not washed (this omission was largely due to inadequate facilities—too few washstands, no paper towels, and a scarcity of soap—all matters of cost), and simple procedures, such as taking temperatures, giving baths, and enemata, were carried out with but little regard for the niceties of technique.

This hospital violated the cardinal principles contributing to an effective nursing service and good nursing care. In the first place, the nursing personnel as a group was poorly qualified; in the second, students were performing procedures and carrying responsibilities for which they were not prepared; in the third, work which should have been delegated to maids and porters was assigned to students; in the fourth, the hours of the staff were too long; in the fifth, far too little time was provided to give the patients the proper care even if the personnel had been well qualified; in the sixth, the working facilities were inadequate; and in the seventh, the element of supervision was conspicuously absent. This last defection is particularly serious in a hospital where practically the entire nursing service is provided by student nurses. It means, of course, that the students are learning by the trial-and-error system, a risky method applied to a situation where the subjects are human beings. One of the rock-bottom principles that should prevail in a hospital where the nursing staff includes student nurses is that adequate supervision be provided; otherwise, not only do the students not receive the proper instruction, but, what is far more serious, the patients do not receive safe care. That in brief is the picture of Hospital X. It is plain to see in that institution the relation between faulty nursing practice and costs.

Hospital Y also maintained a school of nursing. The hospital had a daily average of 147 patients with an approximate distribution of 50 per cent of the total patients on the surgical service and 25 per cent on the medical and pediatric services each. Its ward nursing service presented the exact antithesis to that in Hospital X. There was abundant evidence of well-selected personnel, of well-chosen assignment of duties, of clear and concise records and reports, of a thoughtful program of patient supervision and student instruction, and a sufficient graduate staff to put the program into effect. The constant rush and the evidences of fatigue so apparent in the nursing staff of Hospital X were absent in the staff of Hospital Y, probably because of the provision for a reasonable number of workers, professional nursing and subsidiary, and a reasonable schedule of hours.

Merely to relate the basic factors underlying the operation of Hospital Y's nursing service does not give the complete picture. One had to be an eyewitness over reasonably lengthy periods to appreciate its excellence and finely human side. Thus, for example, the ward procedure book was not limited to a description of manual technique and ward procedures. Consideration was given to the emotional aspects of each ward situation. Admitting a patient involved not merely a series of routine questions to be asked and slips to be filled out. It was an intensely personal affair for the patient and patient's family, and a special opportunity for the nurse to establish rapport with both patient and relatives. One's

total impression of the nursing service in Hospital Y was that paramount to all considerations was the well-being of the patient. A purpose had been defined—good nursing care—and a qualified personnel, enough nursing time, and proper working facilities (all cost-adding elements) had been provided to accomplish that purpose.

One of the first principles underlying the organizing or reorganizing of the nursing service of a ward unit is the gaining of a clear concept of the duties to be performed on that ward. To this end an analysis should be made which will disclose duties that are of an administrative type, duties that have to do with ward housekeeping and cleaning, duties that are more or less of a clerical nature, interdepartmental duties that involve cooperative relationships between the nursing staff and the staff of some other department of the hospital, duties that are directly concerned with the bedside care of patients, and duties that have to do with the supervision of that care. From this analysis, repeated from time to time, duties should be grouped and specifications drawn up, describing the qualifications of the personnel required for their satisfactory performance. The method here described, of analyzing the situation and evolving specifications for the workers who participate in the situation, has long been employed in the industrial world where the products are things. Is it any less important that we apply it to a hospital nursing service where the products are people?

Once this analysis is made and personnel specifications drafted, appointments are made. These appointments include the supervisor, the head nurse on the ward, the assistant head nurse when indicated, the graduate staff needed for bedside care, the subsidiary workers, and so on. Not only should properly qualified personnel be appointed, but it is equally important that they be appointed in sufficient numbers. What constitutes an adequate supervisory-head nurse staff cannot be arbitrarily stated, since such conditions as hospital construction, character of the bedside staff (whether graduates or students or both), the particular type of patient, and the number of doctors who visit the ward will influence the administrative and instructional needs of the particular unit. In general it is suggested that one head nurse and an assistant head nurse, or the half time of a supervisor and full time of a head nurse, be provided for approximately every 25 patients. The number of bedside nurses needed on any ward will depend primarily on the type of patient cared for in that unit. Thus, children require more time than do adults; obstetrical patients, as a rule, less time than medical and surgical patients. Too much emphasis cannot be placed on the relationship between adequate time and adequate nursing.

The Department of Studies of the National League of Nursing Education has gathered from a number of representative hospitals in the East and West information on the bedside nursing time that they provide for the different services. The nursing time provision which is here submitted is upon the basis of this material, plus data assembled in field surveys by our organization and in other studies that have been made on the subject. It is desired to point out that these nursing hours represent the *average* provision per patient in each 24 hours, and that while some patients may require considerably more, others may require fewer hours. The hours for ward and semi-private patients are as follows:

Adult medical: an average of 3 to 3½ hours¹ of bedside nursing in each 24

Adult surgical: an average of 3 to 3½ hours¹ of bedside nursing in each 24

Obstetrical: mothers, an average of 2½ to 3 hours¹ of bedside nursing in each 24; infants, an average of 2½ to 3 hours of bedside nursing in each 24

Pediatric: infants—an average of 6 hours of bedside nursing in each 24; 2 to 5 years, an average of 4½ hours of bedside nursing in each 24; 5 years and over, an average of 4 hours of bedside nursing in each 24

With respect to the subsidiary workers, the number of this group will be affected by the type of patient and the policy of the hospital in delegating duties to them. It is particularly important in the case of these workers that their duties be carefully defined and that they be given no responsibilities for which they are not qualified in the care of patients.

The hour schedule of the staff is an important consideration in providing a consistently sustained quality of nursing. When nurses are on duty 9, 10, and 12 hours over long stretches of time, regardless of the damaging effects on the nurse herself, do we know the hazards to the patient? The tendency for the long hospital day is giving place to a more reasonable schedule, and throughout the country the six-day, 48-hour week is steadily gaining ground. In the case of the student nurses the 48-hour week includes classes. Several schools have gone a step further and introduced a 44-hour week, classes included.

Clear-cut directions of personal responsibilities and routine activities are essential to a common understanding in a situation where so many people are working together as in a ward. A ward procedure book is a necessity. The usefulness of this book is in proportion to its thoroughness, the extent to which it is kept up to date, and its accessibility. Then, too, it is important that the duties of all workers on the ward be outlined and that these outlines be posted where they can easily be consulted. Assignment of patients should be written on a form especially prepared for that purpose. These are just a few of the essential ward records. Effective and safe ward operation calls for a well-defined system of written reports and instructions to workers.

Of all the principles underlying ward administration there is none more vital to skillful nursing care than that governing the assignment of patients to nurses. This statement applies particularly in a hospital where the bedside nursing staff includes student nurses. Too often students who are professionally immature are assigned difficult and seriously ill patients. This practice, without doubt, is poor educational procedure, but of much greater consequence are the hazards to the patient. To safeguard patient care and to provide proper learning opportunities for the student, an assignment plan, based upon the student's preparation and experience and covering a progressive sequence of responsibilities, should be worked out on the different services by the supervisor and head nurse consulting together. The plan should be adhered to within the limits of the current ward situation and the personnel available. Digressions from it should be rigorously avoided for the protection of the patients. The primary end product of a nursing service is the bedside patient care. It is

¹ As reported in *Administrative Cost Analysis for Nursing Service and Nursing Education*, by Blanche Pfefferkorn and Charles A. Rovetta (New York, American Hospital Association and National League of Nursing Education, 1940), the figures for these services are 3.2, 3.2, and 4.2 hours, respectively.—Editor.

the acid test by which the organization and administration of the nursing service may be judged.

Nursing is an art, and no matter how gifted the artist she requires a setting and the tools that will enable her to do her best work. It would be folly for us to predicate that good nursing care is not more costly than poor nursing care. Thus, for example, it requires more nursing time to give patients three hours of nursing care in each 24 hours than it does to give them two hours, and nursing time costs money. And it requires more nurses to staff the nursing service when a 48-hour weekly schedule is followed than it does when a 55-hour schedule is in force.

Nevertheless there are ways of introducing nursing service economies. Each of us knows how a well-planned unit (with respect to service rooms and running water, convenient and sufficient space for working at the bedside) expedites the numerous routines and procedures for the ward personnel. Some of this goes back to the construction of the ward, and sometimes poor planning may be corrected while at other times it must be borne with. Adequate equipment and supplies constitute a second important item, both in expeditious nursing and in reducing replacement outlay.

It is the able head nurse, aware of the approximate nursing load on her ward, of the distribution of this load over different periods of the day, of the total nursing hours at her disposal for covering that load, who plans the time of her staff to the best advantage. Economical time planning cannot be carried out and a consistent balance between load and nursing hours maintained throughout the 24-hour period when the entire staff is on an unbroken eight-hour shift. Unless some members of the nursing personnel are assigned broken hours there will be periods of nursing time wastage, and nursing time costs money.

While the economies inherent in good supervision provide little evidence measurable in dollars and cents, a good supervisory system inevitably reduces the energy expenditure of the staff and the suffering and length of illness of the patient. It is for this reason that adequate supervision is so essential.

I submit for your thoughtful consideration the following principles as being fundamental to a nursing service economically administered:

1. Making an analysis of all the functions or duties to be performed on the ward
2. Classifying these duties into areas or groups according to the type of worker by whom they are to be carried out
3. Specifying the qualifications of the workers for the different areas or groups of duties and making appointments upon the basis of these specifications
4. Providing sufficient supervisor-head nurse personnel to insure the proper supervision of patients and instruction of students
5. Providing enough bedside nursing time to assure a good quality of nursing care for the patients and an opportunity for the students to learn good nursing
6. Assigning patients to nurses (especially in the case of student nurses) upon the basis of the preparation of the nurses to care for those patients
7. Providing adequate subsidiary workers and limiting their duties to the level for which they are prepared

8. Planning the time of the nursing staff so that all periods during the day and night will be properly covered
9. Maintaining a schedule of hours for the staff that insures good care of the patients and reasonable rest and recreation for the workers
10. Developing a clear-cut system of written reports and instructions
11. Providing equipment and supplies essential to good nursing procedure
12. Planning (whenever possible) the physical layout of the ward to save human energy and time

and finally

Planning each aspect of the nursing service so that all patients shall be guaranteed adequate nursing care.

11. The Graduate Nurse in Hospital Service, by Mary I. Bogardus, R.N.*

THE use of the graduate nurse in hospital service is a comparatively new venture and more or less in the experimental stage. It not only presents many new problems to the hospital and nursing administrator as well as the graduate nurse herself, but offers many new and interesting possibilities. Efficiency of nursing service is of primary importance to the patient, the physician, the nurse, and the hospital organization. While it is the responsibility of the hospital to make staff nursing attractive to the well-qualified and ambitious young woman, the graduate nurse must demonstrate that her care of the patient is of superior quality. She should also be well aware of the important part which is hers in securing and maintaining the cooperation of the hospital and medical groups and, through them and satisfied patients, the interest and support of the community.

That graduate nurse service at the University of Chicago Clinics has withstood the economic changes of the past three years as well as the many and varied opinions as to its success is due in no small degree to the sound principles on which it was organized under the able direction of Anna D. Wolf in 1927. This discussion relates entirely to the experiences and existing situation in the above hospital where the nursing service, since its organization, has been carried on by graduate nurses and supplementary workers. We therefore have not had those problems which might arise in the reorganization of a service or in a combined student and graduate staff. In organizing and maintaining a graduate nurse service, consideration must be given to the type of hospital to be served, the economic and social status of the patient to be cared for, the policies of the clinical and administrative staffs, and the cost of the nursing service.

From a study made by Blanche Pfeifferkorn for the National League of Nursing Education on the use of the graduate nurse for bedside nursing in the hospital may I quote the following:

The widespread interest in graduate staff nurse service would seem indicative of a growing consciousness on the part of nursing and hospital administrators that the graduate nurse by virtue of her completed training and more mature ex-

* Adapted from *Am. J. Nursing* 35:112-116, Feb. 1935.

perience is superior as a worker to a student, and that her employment is basic to a consistently good nursing service.¹

Fundamental in striving toward such an objective—a consistently good nursing service—is a careful selection of all members of the staff. The fact that a young woman has completed three years in an accredited school of nursing and successfully passed the state board examination cannot be accepted as sufficient recommendation. Consideration should be given to the general educational and professional background and experience, age, health, and personal qualifications. A personal interview is most helpful in ascertaining, to a certain degree at least, something of the individual's interest in education and professional advancement. The supervisor and head nurse in a graduate group should, in addition to the requirements for a staff nurse, have had special preparation and experience in her particular clinical field. She should possess teaching and executive ability and, what is equally important in a graduate group, the understanding to work harmoniously with all members of the staff. Graduate nurses require constructive and tactful supervision if satisfactory adjustments are made and established policies and procedures are carried out. A personal as well as a professional interest in the individual nurse has not infrequently stimulated her to greater effort and brought out latent abilities. To maintain a high standard of nursing service requires intelligent and skillful application of nursing principles and technique. In such skill, which adds materially to the comfort of the patient, many graduate nurses find the greatest personal satisfaction. In the bedside care of the patient, in the adjustment to new situations, and in assuming responsibility, the staff nurse finds ample opportunity to demonstrate and develop her ability as a nurse, a teacher, and an administrator.

If we are to secure well-qualified graduate nurses for the bedside care of the patient the hospital organization should offer such opportunities and compensations as compare favorably with those found in other professional fields. According to the study made by Dr. May Ayres Burgess in *Nurses, Patients and Pocketbooks* as to the wants of the graduate nurse we find the following: "reasonable hours, adequate income, constructive leadership, and opportunity for growth."² Hospital and nursing administrators cannot fail to recognize the justification of their wants. Not until the hospital partially, if not wholly, meets such requirements will worthwhile graduate nurses be interested in staff nursing.

The hours of service for our general staff nurse average fifty hours per week. This schedule is based upon an eight-hour day with two six-hour days twice a week and one day off duty each third week. The hour schedules are made out one week in advance and although there may be changes in the arrangement of time on the eight-hour day, consideration is given to the assigned six-hour day and the day off duty. Any special requests for time off duty are made before the weekly schedule is completed. The days off duty are covered by nurses who report to the office each morning. A limited number of the most

¹ Blanche Pfefferkorn, *Study of the Use of the Graduate Nurse for Bedside Care in the Hospital*, New York, Department of Studies, National League of Nursing Education, 1933, p. 26.

² May Ayres Burgess, *Nurses, Patients and Pocketbooks*, New York, Committee on Grading of Nursing Schools, 1928, p. 482.

capable and experienced members of the staff are daily assigned to the divisions where extra service is most needed.

The salary for all members of our staff is on a complete monetary basis. Although there have been marked reductions in salary the privilege of individual choice in living arrangements outside the hospital has proved satisfactory and is accepted as one of the contributing factors in the stabilization of the group. The time required to change from street attire to uniform, the additional responsibility incurred in the maintenance of a room or apartment, and the lack of opportunity for group social contact cannot be overlooked. While there is a difference of opinion among staff members as to the desirability of this arrangement, it is recognized as one more nearly normal and comparable to that of other professional women. The salary for the general staff nurse is \$100 per month without perquisites. While much better than the \$25 and \$30 per month with maintenance which is the salary received by many graduate nurses at the present time, it provides little more than economical living.

The vacation allowance, which has varied the past three years, is the same for all graduate nurses of the staff. The increase to three weeks' vacation with salary and one week without was possible this past year. That the nurse recognizes the definite need for a four-week vacation was indicated two years ago when the vacation allowance was less, and over 75 per cent of the staff requested an additional week as leave of absence. Individual requests for one or more days' leave of absence during the year are granted whenever possible. To cover such absences special duty nurses are secured for temporary service at the regular general duty salary if for more than one day. Members of the staff are encouraged to attend conventions and meetings of professional interest, also to visit other hospitals. No deduction in salary is made for the time requested for these purposes. A two-week illness period, with salary, is allowed within a given year.

The participation in the health service program provides for medical attention, immunization as indicated, hospitalization for two months, and certain other limited privileges as to x-ray and clinical service. A physical examination, which includes an x-ray of the chest, is required before any member of the staff is accepted. The monthly assessment for this service is one dollar. The benefits are increasingly greater and more satisfactory to the hospital and the staff as the service becomes more stabilized.

As indicated previously, the supervisor and head nurse must represent high standards individually and professionally if they are to have the respect and cooperation of the staff. There is a most unusual opportunity to build up in the hospital graduate nurse group that type of organization which will compare favorably with that found in the public health field which is repeatedly recognized as an excellent example of constructive leadership. The rotation of service within a given unit and transfer from one division to another materially increase the responsibilities of the supervisor and the head nurse. It has, however, brought about greater interest in all types of activity, and better understanding in sharing the responsibility. It also gives the graduate nurse an opportunity to have a varied experience in new situations and under different leadership.

Professional advancement within our organization is necessarily limited, as our super-

visory and head nurse group is a small one. Consideration is given to the nurse of outstanding ability although personality and group adjustments sometimes prohibit consideration of promotion within the group. In our present staff of twenty-three supervisors and head nurses, thirteen have been promotions.

With the facilities of the University of Chicago at hand a plan is effected whereby it is possible for the graduate nurse to continue her academic work. One course can be taken at the University with full-time nursing service—the fifty-hour week—and two courses with the part-time service—the thirty-hour week. While there are many problems relative to the arrangement of hours for these two groups and there is frequently the question of divided interest, the plan is on the whole satisfactory and one well worth the adjustments which are required. The opportunity for continuation with academic work undoubtedly explains to a certain extent our large number of desirable applicants.

The staff education program in a graduate nurse group offers many possibilities for professional and cultural education as well as experience in individual participation. The program for the general staff meetings which are held once a month is planned by a committee made up of members from each group. Social activities are incorporated in this program as the opportunity for group contacts is somewhat limited. Supervisors and head nurses each have monthly meetings for which a program is arranged. A certain portion of the hour is given over to a discussion of existing administrative and nursing problems. Of perhaps greatest value is the weekly conference on each division. A presentation of a case study and the discussion of a new treatment or procedure require study and investigation which may easily be overlooked if not definitely planned for. Orientation classes for new members of the staff have been found to be very helpful in adjusting to a new situation and understanding new procedures if given near the beginning of the service. This review of administrative policies, discussion of nursing technique, and demonstration of new procedures, which requires twenty hours, is given by the supervisor who is the administrative assistant.

Among the questions uppermost in the minds of the hospital and nursing administrators in considering the graduate nurse for hospital service are the hours of service required for the care of the patient and the cost of such service. If a graduate nurse service is to be economically administered, the staff nurse must be relieved of some of the non-nursing activities. A material reduction can be made in this cost if the graduate staff is supplemented with untrained workers. It is advisable to have the administrative and clinical staffs understand the policies concerning this group. A careful differentiation of services, definite assignment of duties, and consistent supervision are absolutely essential. The duties of these workers—attendants, orderlies, and maids—might be termed nonprofessional and should be carefully restricted as related to the care of the patient. We have found that the competent attendant can satisfactorily care for the less acutely ill or convalescent patient under supervision. The duties of the attendant, orderly, and maid cover a wide range of activities including all housekeeping on the divisions.

No less important than the supplementary worker is the clerk on each division, who materially relieves the head nurse of many routine duties and detailed work. Answering

the telephone, delivering messages, typing time schedules and other routine forms, caring for the details of admission and discharge of patients, and the daily graphic charting of temperature and pulse are only a few of her numerous tasks. No mention has been made of the out-patient and operating room services as the same general policies regarding the staff obtain throughout the hospital.

Changing situations which have a direct bearing upon the personnel and the quality and quantity of their services are not discernible in any statement as to hours of service or cost of such service. As we have not made a detailed study of these two very important phases of nursing the figures which I quote cannot be accepted as of any particular significance. The six-month period from October 1, 1933, to April 1, 1934, may be used as typical of our situation. The head nurse is included in each instance in the graduate nurse hours, and the service covers a twenty-four-hour period.

On a men's surgical division with an average daily census of 30.5 patients, the hours of service per patient per day totaled 4.37, of which 2.01 hours were graduate nurse service and 2.36 hours supplementary service. The staff allocation for this unit at that time was as follows: one head nurse, seven staff nurses, one clerk, four attendants, four orderlies, and one maid. On a women's medical division with an average daily census of 29.1 patients the hours per patient per day totaled 3.96, of which 2.17 hours were graduate nurse service and 1.79 hours supplementary service. The staff for this division was one head nurse, seven and a half staff nurses, one clerk, three attendants, and one orderly. The hours of service on a private division with an average daily census of 18.2 patients totaled 6.29, of which 3.46 hours were graduate nurse service and 2.83 were supplementary service. The staff for this division was one head nurse, six staff nurses, one clerk, two attendants, one maid, and two and one-half orderlies. The cost of nursing service for this period was \$2.57 per patient per day. No differentiation has been made as to cost of the graduate and supplementary services.

May I inquire if the responsibility for the future of graduate nurse service in the hospital is not a divided one? First, the graduate nurse should, by proving that her service is at all times of superior quality, make graduate staff nursing indispensable to the physician, the hospital, and the community. Second, the hospital will have to offer such opportunities and compensations, monetary and otherwise, as compare favorably with those to be found in other professional fields, if the well-qualified graduate nurse is to be interested in staff nursing. Third, the nursing administrator must recognize the necessity of developing this program on a sound and economical basis and create in her staff a cooperative spirit of responsibility for a consistently good nursing service.

12. Nursing Service Measured by Social Needs, *by Michael M. Davis**

AN immense amount of effort has been devoted during the last dozen years to devising and using measures of the quality of nursing education and nursing service. Has any com-

* Adapted from *Am. J. Nursing* 39:35-40, Jan. 1939.

parable amount of attention been directed to securing and utilizing yardsticks for the extent of nursing services in relation to social need? I propose therefore to consider what yardsticks of this sort we have had, what yardsticks we need, how they should be used, and by whom. What proportion of the population and what income groups are served by nurses for pay? What proportion of the population is given free service by nurses? Do we know the answers to these essential questions? There are no current statistics to answer them, and only a few special studies.

There are about 300,000 professional nurses, including in this figure some 80,000 students in training and, among the 300,000, about 120,000 nurses who are private practitioners. Some of these give all or part of their time to caring for hospitalized illness as "specials"; figures from registries show that more than 80 per cent of the private duty calls are of this character. The proportion of nurses and nursing time given to private service in homes we do not know. We do know that most "special" duty in hospitals is for that small fraction of the public who have comfortable incomes. A study made by the Committee on the Costs of Medical Care, during the period 1929-30, showed that (excluding patients receiving ordinary hospital nursing) about 12 per cent of the whole population received paid nursing care in the course of the year in their homes or from special nurses in hospitals. In addition, about 6 per cent of the population received free nursing care in their homes, mostly from public health nursing agencies.¹

An analysis of the Committee's figures according to income groups served shows that most of the paid work of private practitioners in nursing is among the comparatively well-to-do. Among the families studied by the Committee on the Costs of Medical Care, those with incomes under \$1200 secured paid nursing care but rarely—only one family in twenty getting it in the course of a year. Among families with incomes between \$1200 and \$2000, about one family in twelve secured it; whereas among families with incomes between \$5000 and \$10,000 more than one family in six had paid nursing service during the year; and among families with incomes of \$10,000 and over, nearly one family in three.²

Roughly, it may be said that the 120,000 nurses who are private practitioners are trying to make a living mostly from the top 10 per cent of the population, classified in terms of family income. Is it any wonder that most private duty nurses are only part-time workers and that in 1937 (to judge from registry reports) 40 per cent of them were employed less than half their time? Or that most private duty nurses earn much less than most institutional nurses and have less security?³

The somewhat scanty figures concerning private duty nurses show that their low median earnings—\$810 in 1935—are largely due to unemployment rather than to employment at low rates. It is also true that only a certain proportion of private duty nurses seek full-time work, while a considerable number, because of family obligations or for other reasons, do

¹ I. S. Falk, Margaret C. Klem, and Nathan Sinai, *The Incidence of Illness and the Receipt and Costs of Medical Care among Representative Families*, Chicago, University of Chicago Press, 1933 (Publication of the Committee on the Costs of Medical Care, No. 26). Percentages based on figures in Appendix Table B-33, p. 288.

² *Ibid.*, pp. 129, 131.

³ What Registries Did in 1937, *Am. J. Nursing*, Oct. 1938. Chart 2, p. 1123.

not place themselves on call for more than a part of their time. Yet the median earnings of a sample group of those who sought to be "full-year workers" in 1936 were only \$1260. Whatever the reasons for part-time work among private duty nurses, the results for the community are the same: limited nursing service. Within this situation is hidden the paradox that a shortage of nurses complained of in some localities is compatible with widespread underemployment and low incomes among many nurses.

Dr. Roger Lee and his collaborators, in their study of the fundamentals of medical care, estimated (1933) the amount of nursing care needed by the population to meet professional standards of service for the amount of various types of disease.⁴ The estimate showed that a rate of more than one-half day's nursing care per year per capita population (exclusive of ordinary nursing care in hospitals) is needed. If we make an estimate of the amount of nursing care actually furnished, we do not find a reliable body of data, but roughly, from the known amount of unemployment of nurses in private duty and the amount of work done by salaried visiting nurses, it may be estimated that about one-fifth day's nursing care per capita of our population is now supplied the people of the United States outside hospitals. If this figure is reliable, the amount of nursing now supplied outside hospitals is about 40 per cent of the amount needed.

If we had for each state and for many local communities such yardsticks of public need as compared with services rendered, we should be much farther along in judging what should be done, and where and how. We have no current information from which such yardsticks for practical local purposes can be made; we have to make special studies to get such yardsticks, and these special studies are very expensive. But the nursing literature of the past few years and the reports of committees, including the Joint Committee on Community Nursing Service, show, it seems to me, that although the need for getting and using such yardsticks has been in the consciousness of the professional nursing groups, it has not been taken seriously in a practically effective way.

From the public point of view the picture is a disturbing one. Of the private practitioners of a great profession, many earn small and insecure incomes, many are employed for an average of not more than half of their time, while sick people needing their services are getting from these nurses less than half of the service they need.

The figures of the Committee on the Costs of Medical Care were for 1929-30. That the 1929-30 figures were not exceptions is borne out by the recent findings of the National Health Survey for 1935-36:

Approximately 1 per cent of disabling illness among the surveyed relief population received bedside care from a private duty nurse, compared with 12 per cent in families with incomes of \$3000 and over. A higher proportion of illness among persons on relief received care from a visiting nurse than did those with incomes in excess of \$3000. However, the higher volume of visiting nurse service received by relief and low-income families in no sense compensates for their relatively low

⁴ Roger I. Lee and Lewis Webster Jones, *The Fundamentals of Good Medical Care*, Chicago, University of Chicago Press, 1933 (Publication of the Committee on the Costs of Medical Care, No. 22). Pp. 121-125.

volume of continuous bedside care, a type of nursing service which is indicated for certain severe types of illness.⁵

Professional nursing in the modern world began in hospitals and extended out from them into private practice. The services of professional nurses thus began with the poor, since in the 'seventies and 'eighties when professional nursing started, the hospitals received practically no one except the poor. Private practice in nursing, in and out of hospitals, has moved far from its original clientele, for it has become in the main a luxury service. It does not require statistical surveys to show why this is true. The private duty nurse on eight-hour duty ordinarily charges a fee of \$4 to \$5; on twelve-hour duty \$6 to \$8, to which \$1 to \$1.50 must be added for board if the patient is hospitalized. If the patient requires continuous nursing care, it may be necessary to employ two (or three) nurses at a daily cost of about \$15. At the present time, not more than one-sixth of the families in the United States have incomes exceeding \$2500. Twenty-five hundred dollars a year means an average daily income of about \$7, just about the average daily cost of a private duty nurse, including board. Obviously, only the families with incomes in the top sixth of the population can afford a private duty nurse without financial difficulty or distress.

The utilization of nursing care by the people is related to the organization of nursing service. As has been said, about 120,000, or 40 per cent of the 300,000 professional nurses, are in individual practice (it might be called "unorganized" practice) whereas about 60 per cent practice nursing as part of an organization. Of the 180,000 nurses who practice under organization, a little less than 80,000 are salaried graduates in hospitals. Another 80,000 are student nurses in hospitals. Somewhat over 23,000 nurses are in public health and visiting nurse associations, including voluntary, governmental, and industrial services. Thus about 53 per cent of all professional nurses are giving their entire time to the care of hospitalized illness, and a small additional percentage of private practitioners are giving at least part of their time to caring for hospital cases as "special nurses." In other words, considerably more than one-half of the entire nursing profession is engaged in caring for about one-tenth of all cases of illness.⁶

Hospital nursing began as a service to the poor, but thirty years ago or more our hospitals started to serve people who are not poor. Hospitals have steadily expanded their service to full and part-pay patients without losing their charitable or semi-public status in the eyes of the community. The other branch of the organized practice of nursing, nursing care in the homes through visiting or public health nursing associations, began like hospital service among the very poor a generation ago.

To what extent have these organized home services by salaried nurses taken up the slack which the bedside care of private duty nurses fails to grasp? The quotation from the National Health Survey has answered that question. Statistics of the Committee on the Costs of Medical Care (1929-31) show that, taking visiting nurse and private duty care together,

⁵ The National Health Survey, 1935-1936, Preliminary Reports: *Illness and Medical Care in Relation to Economics Status*, Washington, U. S. National Institute of Health, 1938 (mimeographed).

⁶ *Facts about Nursing*, 1938, Nursing Information Bureau, American Nurses Association, 1938, p. 13.

among families with incomes from \$1200 to \$2000, only about one-half the proportion of the families received any home nursing care as compared with the proportion among the well-to-do families.

Visiting nurse associations have made a start in the direction of serving people above the poverty level, but only a beginning. They are twenty-five years behind the hospitals, and it does not seem that the visiting nurse associations have considered that the expansion of their service among people who could pay their way, wholly or in part, was one of their major responsibilities. Some associations have taken steps in this direction. Hourly nursing, for example, has been started by a few. But from my perhaps insufficient observation, the hourly service has not been flexible enough to meet the needs and even the demands of the people that should utilize it. Hourly nursing will not be successful under visiting nurse associations until it is an integral part of the policy of the association—not a mere outgrowth; until it is administered as an opportunity and not as a concession; and until it and the work of the visiting nurse association in general are closely related to the local registry for private duty nurses.

If visiting nurse associations had considered the extension of service to paying patients as a major responsibility, we should find in their annual reports and in the statistics collected by the NOPHN much prominence given to at least these two yardsticks—namely, the percentage of paying or part-paying patients and the proportion of income derived from patient payments. Hospitals, by and large, have become proud of the proportion of services rendered to paying patients; visiting nurse associations, with a similar social obligation, have been timid about it. Of course we all understand that the chief reason for timidity has been anxiety lest charitable contributions should be lessened. Hospitals and out-patient departments have extended services to many patients who pay all and to still more patients who pay part of the cost of their care, and have succeeded in educating their own boards of directors and also their contributors to understand that these paying and part-paying services are consistent with the charitable function and with the continued need for charitable contributions. The visiting nurse associations need a little more courage and more than a little advice from skilled public relations counselors, in order to educate their present and potential contributors.

Another important yardstick for estimating the relationship between social need and services rendered is to be had in the geographical distribution of graduate nurses. The United States census is taken every ten years and gives the number of nurses and their location by states, cities, and counties. The figures of the 1930 census have been more or less analyzed in this way. They give us information only about “nurses,” “trained nurses” so called, without discriminating between the hospital, public health, and private practice groups. From the census and other sources we learn that for all three groups of nurses there is a high concentration in the cities as compared with rural areas, a relative concentration in states and regions which are well off financially, and a relatively small number in the sections of low economic resources. We have not, however, any detailed figures, especially about the large private practice group. We cannot secure from the national nurs-

ing associations the distribution of nurses between census periods, by states, cities, and counties, excepting, of course, nurses in hospitals, although this information is fundamental as a measure of the success of the nursing profession in distributing its members where they are needed.

How should these figures be obtained? Most if not all the states, through their official boards of nurse examiners, have a list of registered nurses which is likely to be fairly accurate at least once a year. The mobility of nurses seems to be considerable. I am told that in one large state, one-third of the entire body of registered nurses change their addresses within the state annually, so that the clerical task of keeping a single national registry currently up to date, by data secured from all of the state nurse boards, might be financially impracticable. It should not be impracticable, however, for a national nursing organization to encourage each state board to make an annual analysis of the distribution of registered nurses in its state by cities, towns, and counties of residence, and for the national association then to collate these figures and make them available to the profession and to the interested sections of the public. I do not believe that the cost of this plan would be beyond the present means of such an organization as the American Nurses Association, and I certainly believe that if professional attention were directed half as much to the distribution of nursing services as it has been to the production and education of nurses, we should have such data and such indexes within four years.

I should hasten to state that the public health nurses have taken a census of their own group of salaried nurses at certain intervals. The 1931 "census" by the NOPHN has been followed by the 1937 and 1938 studies made by the public health nursing consultants of the United States Public Health Service and the Children's Bureau. These data ought to be current rather than occasional, and they could be.

It is worth noting that while the population per urban nurse varies only slightly for the different sections of the country, there is great variation for rural nurses. The lowest ratio for urban nurses was 4000 in the Northeast, and the highest 9000 in the South Central section. While there are 5000 and 6000 people respectively per rural nurse in the Northeast and in the West, in the other three regions the population per rural nurse varies as follows: North Central, 14,000; South Atlantic, 16,000; and South Central, 22,000.⁷ The 1937 figures also show that in the country as a whole the ratio of nurses to population is one to every 5000 people in urban populations, and in the rural areas only one to every 11,000. Leaders in public health nursing and the national organization have preached one public health nurse to every 2000 population as a needed ratio. I do not question their interest in this ratio, but I cannot see evidence that they have taken steps commensurate with their opportunities and responsibilities for realizing it in practice.

In nurses, as well as in physicians, dentists, and hospital beds, the rural areas are gener-

⁷ Census of Public Health Nurses 1937, *Pub. Health Nursing*, November 1937, pp. 648-652. *Total Number of Nurses Engaged in Public Health Work in the United States, Hawaii, and Alaska on January 1, 1937* (B.2043), *Number of Nurses Engaged in Full-time Public Health Work on January 1, 1937* (B.2043), *Comparison of the Total Number of Nurses Engaged in Public Health Work in the United States, Hawaii, and Alaska on January 1, 1937 and January 1, 1938* (B.2561), Washington, U. S. Public Health Service (mimeographed).

ally low. The state health departments, now at last beginning to be backed by more than nominal funds from the U. S. Public Health Service, have taken some responsibility for extending public health departments, and along with them some public health nursing, into rural areas. Some states have done much more than others. There has been no national voluntary agency, professional or lay, which has given much attention to rural nursing service except the Red Cross. Red Cross policy, as I understand it, decrees that each local area may retain funds raised during the annual roll call, to be used for nursing or other community service through the local chapter. This rule is always followed for roll-call funds except in times of disaster. Money left over after a local disaster might be allocated to public health nursing in a rural community, but such a method of financing could never develop rural public health nursing far. No progress can be expected in many of our rural areas if only the local resources of these areas are to be drawn upon. If voluntary funds are to play any significant part whatever in the extension of public health nursing, there must be a central fund under such an organization as the Red Cross, which will be drawn upon to extend service in precisely those areas which most need it and can least afford it.

We should know the number and location of public health nurses by counties as well as by regions and by cities of various sizes. We should also study medical organization in those regions low in public health nursing service. We need to ask such questions as: Do we need more organized nursing service, not limited to 10 per cent of illness or to 20 per cent of the population? If so, where do we need the organizations and services? To answer these questions we must take up field glasses and spy out the territory ahead. Then we must ask quantitative questions about nurses and services: Just where? How much? Then we shall need the yardsticks.

The recent conference called by the Federal Government at Washington gave evidence that the largest organized popular groups in this country—labor, farmers, parent-teacher and similar associations—are stirred as they have never been before concerning care in sickness, and that they expect voluntary agencies and government to take steps toward meeting evident existing needs. A profession will stand in public esteem according as it meets effectively the public demand for its services. Public demand is not the same as public need. The demand exists only in so far as potential consumers realize their needs. The National Health Conference demonstrated that the people of the United States now realize their need for care in sickness more than ever before. Need is being translated into demand. Widespread popular demand will be translated into action. Action may be by either professional or lay bodies or by both. The American Nurses Association and its younger sister, the NOPHN, need to move forward as rapidly as possible, because only the profession can take into account quality and standards of service, whereas the lay public will take account only of quantity.

It is of the first importance, therefore, that professional agencies lay emphasis upon yardsticks concerning the extent of nursing services; that they make the public conscious of the yardsticks of both quantity and quality; and that they lead the public in making

the yardsticks useful. I am not sure whether the professional nursing agencies can perform this task. Perhaps it must become the responsibility of the public authorities, through the public health departments. The present moment challenges both.

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CHAPTER VIII. OPERATING ROOM

I. Why Hospital Surgical Practice Should Be Standardized, *by Joseph C. Doane, M.D.**

IT has been said that standardization of hospital procedures is impossible because of differences in types of administration, in clientele, in location, and in architecture. It has been claimed by many that the technique involving operative procedures is such an individual matter that to endeavor to establish methods by which all should perform one type of work would be to deprive the individual of his professional prerogatives—to transform him from a thinking being into an automaton.

There are as many methods of preparing a patient for operation in some hospitals as there are surgeons. In some institutions all patients are made ready for operation on the day prior to surgical treatment, only the final sterilization of the skin being performed in the operating room. In some hospitals the day surgical nurse performs this work, in others, the night nurse. When the latter system is in use, it is not unusual for a patient to be kept awake most of the night prior to the operation because of the shaving, scrubbing, application of sterile dressings, and administration of enemas required. Why this night of all nights should thus be made hideous for the patient is rightfully a mystery to the public. In some instances, all operations for the following day must be scheduled prior to 3 p.m. and in others prior to 6 p.m. In others, no preparation is given in the ward and an antiseptic is used for the sterilization of the skin after the patient has been placed on the operating table.

Now there surely must be some procedure of choice that is safe, of the greatest convenience to the surgeon, of the least annoyance to the patient, and of minimum expense in time and money to the hospital. If this is the case, should not surgeons and hospitals accept a standard comprising at least the basic details of this type of work?

It is surprising how the preferences of surgeons vary in regard to such common practices as dressing for an operation. Nevertheless, it is the usual experience of operating-room supervisors that some surgeons desire their gowns held for them, others refuse to allow nurses to unwrap sterile packages, some prefer caps of one design and some of another, some dislike gloves with powder and some will accept no other. Here again there must be a method of choice. There will be those who decry the necessity of standardization in such matters, and yet it is not difficult to prove that to waste the time of hospital employees is definitely to waste money. It seems reasonable to question whether it is a mark of scientific skill, of an egocentric personality, or of just a fine thoughtfulness for the good of the patient that prompts one individual to endeavor to be different from all others.

* Adapted from *Mod. Hosp.* 37:89-91, Nov. 1931.

Only a few years ago complicated processes were in vogue for the sterilization of the hands and arms of the operator. The use of full-length arm basins containing solutions of potassium permanganate, alcohol, or some mild fat solvent, of scrubbing and immersions, all these preceded and have been replaced by the simplified though safe methods of today. A glance at the present methods of sterilizing gauze and other operating-room material is enlightening. In any group of a dozen or more hospitals, one is likely to find that such a simple matter as the sterilization of gloves has as many variations as the number of institutions being studied. The methods of sterilizing control employed, the use of indicators or gauges, and frequently the blind trust in the efficacy of steam all cry aloud for some authoritative statement that can be easily proved and hence acceptable to hospitals generally. In some operating rooms the sheets employed for draping are gray, in others green, and in many white. Which is the most acceptable and practicable? If there is no choice, why should not one of these colors be universally employed? Sponges in many instances are of all kinds, shapes, and textures.

The foregoing statements have been made without any endeavor to detract one iota from the splendid service the surgeon renders to the hospital, or even to attempt to suggest the best procedures to be employed. They have been set down in order to present to the hospital field as forcefully as possible the chaotic and confused situation that exists in the surgical and operating-room departments. The same situation exists, in perhaps a lesser degree, in every other department of the hospital. It is to be found in the janitorial service, in the medical wards, and in the out-patient department. Many hospitals seem inclined to be content with their own practices, in many instances generation after generation accepting the methods of performing work that have been handed down by their predecessors. Standardization of institutional technique cannot be discussed intelligently, therefore, unless some consideration is given to the methods by which such procedures are brought into existence.

It has been intimated that the source of many of our common practices may be found in the local traditions surrounding the hospital. It has been said that the common practices of today become the traditions of tomorrow. A strong medical personality can spend only a few years in the hospital's service and the method by which he performs his work becomes so built into the institutional practice of his specialty that it is likely to continue there for many years.

Staff physicians and administrators of hospitals, for that matter, are often too strongly individualistic. A tradition has therefore become implanted in the hospital that the surgeon or internist may achieve such ends in any way he likes. Although this attitude is not unreasonable, yet when this generosity on the part of the hospital in providing a great variety of supplies and in requiring nurses to spend unnecessary time in serving the surgeon reaches a point at which hospital expenditures are strongly affected, it is time carefully to scrutinize the necessity for such a policy on the part of both the hospital and the surgeon. It must be granted, moreover, that the advantage or disadvantage of employing certain tech-

niques and drugs is difficult to prove. There are those who believe that a particular type of digitalis has more life-saving properties than any other. This attitude, however, must remain one that represents the belief of an individual and not one that always is capable of definite proof.

Many hospitals, therefore, have been unable to make any attempt at standardizing institutional procedures. They have been afraid to undertake such a step because of the likelihood of arousing opposition on the part of those most affected. They have been content to continue along lines of least resistance, not only from the standpoint of rules and regulations governing professional procedures but even of rules affecting the intramural conduct of professional nursing and of their own staffs.

A common method of preparing systems of technique is to request the visiting staff to undertake this work. Difficulties immediately develop because of the strong tendency to individual thinking and acting on the part of members of the staff. There are those who believe that certain methods represent the safest type of treatment for the patient and they are to be respected and honored for adhering to such a belief. There are others, perhaps with broader vision, who seem able to accomplish creditable results with less complicated instruments and less detailed technique. Whether or not a staff is permitted to prepare its own rules or to attempt standardization of its own practices, the board of trustees must ratify such regulations before they can become fully effective.

Specialization in medical and surgical work requires a great variety of carefully manufactured, expensive instruments. Hospital administrators should exercise understanding when it comes to providing instruments for these specialty groups, and yet one is inclined to wonder why one physician requires so many instruments while another is apparently able to accomplish splendid work with much simpler and less expensive tools. The man who can perform good surgery with the simplest set of instruments is a great asset to any institution. The First World War demonstrated that the finest of emergency work can be done with few instruments. It must be granted, moreover, that the basic laws of surgery do not designate the exact curve of the needle or the length of the hemostat handle and that the thousand and one different types of instruments, many bearing the name of their originator, are but the expression of what has appeared to one individual as the most convenient and effective instrument to employ.

In these days of economic stress the hospital is being driven to adopt every expedient in an endeavor to lessen the cost of its service. While a comparison with the practices of the commercial world is hardly applicable, it may be stated that no manufacturing concern could long exist in the competitive field unless it made an effort to learn the best and cheapest method of performing its work and thus could market the finished product with the least expenditure of time and money. Thoughtful hospital executives are endeavoring to save every hour of their employees' time and to avoid the expenditure of every unnecessary dollar. No one can estimate the added expense to the hospital or the degree of lessened efficiency in service to the patient that is represented by the conditions described.

2. Sterilization, by A. J. Hockett, M.D.*

THE question has arisen from time to time as to the proper person to be designated as being responsible for the sterilization of all surgical dressings within the hospital. No satisfactory rule can be formulated which will apply to all hospitals because of the fact that such a rule would have to be elastic enough to take care of the many exceptions which are bound to occur according to the construction and administrative set-up of the hospital itself. Where dressing sterilization is performed by the central supply room, it is perfectly obvious that the central supply supervisor should be held responsible for all surgical dressings. Where the hospital is large enough to provide separate delivery rooms and a sterilization department for them, it is of course the delivery-room supervisor who is held responsible for this procedure.

The difficulty which arises occasionally occurs in the main operating sterilization room, where maids, orderlies, nurses, and doctors are working together. In this particular situation, who is the best person to designate for the responsibility? While at first thought it might seem obvious that the operating-room supervisor should be assigned this function, it has been found in common practice that because her duties are so numerous almost invariably it follows that she assigns the work to some subsidiary worker, resulting in a multiplicity of persons responsible and a breakdown in operating-room morale, which is the bane of every administrator at some time or other. In the experience of this writer, it is much more desirable to assign this duty to some other graduate nurse in the department, or to an efficient and trustworthy orderly who has worked in the operating room long enough to realize the responsibility of this job. Under this system the superintendent and the surgeon, or both, will at all times have one particular person to whom they can turn for advice in regard to breaks in technique which do occur from time to time.

There are a great number of methods for determining the efficiency of pressure steam sterilizers now in common use in all hospitals. Equipment of this kind has only one function, namely sterilization, and any method which tests the actual sterility of material subjected to the temperature and pressure ordinarily used is therefore the best method of testing their efficiency. This can best be done by cultures which are checked by the laboratory. This method is not practical except at occasional intervals but is probably the most accurate available. There should be provided as standard equipment a thermometer to record the temperature in the outlet and a recording thermometer to record the temperature maintained within the sterilizer during the sterilization period. We have found the Diack controls the best of the known chemical preparations on the market for determining whether or not proper sterilization temperatures have been achieved within the surgical bundle itself. The only difficulty with this method is its rather high cost, which we have been able to hold rather low by employing it only in the larger packages. We do not believe that small bundles carry the same hazards as large ones, if properly prepared and properly

* Adapted from *Hospitals* 12:91-92, Mar. 1938.

packed on edge in the autoclave. Our experience with the other chemical methods has not been universally satisfactory. We have found the small but authentic textbook by Underwood on *Surgical Sterilization* a great help in instructing our operating-room personnel in the proper methods of high pressure steam sterilization.

One of the bugaboos of every operating room is the lack of a foolproof method for differentiating between bundles of sterile and unsterile supplies. When we consider that a human life hangs in the balance whenever there is a failure of any system so established, we can readily appreciate the importance of any procedure which appears to be quite simple. As a matter of fact the efficiency of any system used may generally be computed in direct ratio to its simplicity. At Touro Infirmary, each bundle is dated with a rubber stamping machine as it leaves the sterilizer. While we have found this system to be almost 99 per cent efficient, it is possible to release a non-sterilized bundle without erasing the date, and therefore possible for the same bundle to make its way into the sterile supplies and constitute an operating-room hazard. Because of this fact we have inaugurated a system of placing on the outside of each bundle a small tag, perforated in the middle, with the upper half marked "sterile," in large letters, and the lower half marked "unsterile," in large letters. This tag is attached to each bundle before sterilization, and following sterilization the lower half is torn off and discarded. No bundle is accepted for operation without a tag. We have found this simple method to be quite efficient and, in connection with the dating procedure and the chemical control, gives us an accurate check on the sterility of each and every surgical package.

For many years the American College of Surgeons and the American Hospital Association have cooperated in a movement toward standardizing surgical dressings. As a result of their combined efforts, standardized dressings have been placed upon the market by our friends in the commercial field, at a cost comparable to, or even below, that of dressings made by hand within the hospital. When hospitals buy ready-made dressings, the use of standardized sizes will be found advantageous. In those hospitals which have active and interested women's auxiliaries or church organizations which assist with the making of surgical dressings, the labor cost does not enter the price of these supplies, and as a result they find it more economical not to buy ready-made and standardized dressings. In these instances most hospitals have not found the use of standardized dressings of great importance, and have therefore developed what might be considered dressing pharmacopoeias for their particular hospital.

In conclusion the writer would like to add one more thought to the subject of operating-room sterilization. In spite of the fact that Asa S. Bacon, Presbyterian Hospital, Chicago, more than fifteen years ago introduced the practice of dry autoclave sterilization for surgical instruments and utensils, this method is not in wide use by hospitals, even at this date. Many hospitals continue the practice of boiling sharp instruments and tolerate dull edges and uncertainties of sterilization, when high pressure steam sterilization for these articles will be found to be a real economy and a perfectly simple procedure. At Touro Infirmary, we have been able to reduce the replacement cost for certain instruments more than $33\frac{1}{8}$

per cent in one year by the adoption of this method. We can heartily recommend it to you for your consideration.

3. The Department of Anesthesia*

So important and widespread has become the administration of general and local anesthetics, that in many institutions a department of anesthesia with an administrative head has been developed with well-defined duties and qualifications for its members. In too many institutions, however, the administration of anesthetics is supervised in a more or less slipshod way, and the instruction of interns and nurses, as well as of physicians from without the hospital, receives but a modicum of attention. Indeed, it would seem that those institutions possessing a well-developed and clearly recognized department of anesthesia are in the minority.

This should not be so, for not only does a carefully administered anesthetic forward the interests of the patient in so far as the actual saving of his life is concerned, but it also prevents what to him is often the most disagreeable remembrance of his hospital stay. There is no disputing the fact that the first stage of a poorly administered anesthetic is to the patient a nightmare, the remembrance of which he loses but slowly. The reduction of post-operative shock is closely associated with the exemplification of the art of administering ether, as well as with the proper handling of other factors that prevent actual damage to a more or less easily upset nervous system.

Every hospital department, to be efficient, must have an administrative head. The department of anesthesia is no exception. The chief anesthetist should be responsible for the proper administration of all general anesthetics. In some institutions, this individual is also skilled in the administration of local and spinal anesthetics. He should be responsible for the proper instruction of interns and resident physicians in the art and science of administering ether, chloroform, and ethyl chloride. In institutions where a new group of interns is assigned at regular periods to the operating rooms, it should be his duty to deliver didactic lectures on the subject of anesthesia and to follow these talks with actual clinical demonstrations in the use of the various types of anesthesia and resuscitation apparatus employed in the hospital. He should make certain that each anesthetist is capable of administering an anesthetic safely, and should not permit any one of these young men or women to undertake this work for the sake of gaining experience without feeling confident that he or she is capable of doing so.

The relation of the chief anesthetist to the visiting staff is of interest and importance. The anesthetist is frequently given a full staff appointment. He may or may not live within the institution. He usually is a young physician with special training in this work who is practicing in the community and hence devoting but a part of his time to hospital work. During his absence from the hospital a nurse anesthetist often takes his place. He is responsible for the requisitioning of supplies for his department and for the care and upkeep of expensive and complicated anesthetizing apparatus.

* Adapted from *Mod. Hosp.* 31:86-89, Nov. 1928.

The relation of this officer to the surgical supervisor must be clear cut. She is not the superior officer of the anesthetist. Lack of understanding of this fact has sometimes produced friction between these two persons which incidentally disturbed the peace and serenity of the clinic and actually reacted to the disadvantage of the patient. In most departments of anesthesia it will be noted that the chief anesthetist, whether or not he actually administers the anesthetic, is in the last analysis responsible to the surgeon for the excellence, or lack of it, of the anesthesia. Direct lines of authority run from the chief anesthetist to interns, nurses, and others who administer ether or gas. The chief anesthetist is also, in certain matters, responsible to the superintendent of the hospital. But the surgeon is actually in charge and responsible for the welfare of the patient and therefore must have complete control over the acts of the anesthetist. While the anesthetist should consult the surgeon in regard to the type of anesthesia to be employed, he is also responsible for furnishing to the surgeon any information he possesses in regard to special indications that might affect the selection of the anesthetic.

The chief anesthetist is sometimes held responsible for the presence of a properly signed operation permit as well as for the presence, on the patient's chart, of the results of the chest and urine examinations. In other institutions these duties are performed by the surgical intern or by the assistant of the operating surgeon. In any case, it should be the duty of the chief anesthetist to inform the surgeon concerning any data that might affect the chances of the patient for a speedy recovery.

It is necessary to have on duty at all times persons who are qualified to administer ether. In some institutions, the chief anesthetist certifies to the medical officer in charge the names of interns whom he deems so equipped. A schedule of hours on and off duty must also be arranged for this group. Sometimes where interns are not largely relied upon for the administration of ether, a paid nurse anesthetist assumes the responsibility for night anesthetics. It is the duty of the chief anesthetist to furnish from time to time, to the medical officer in charge or perhaps to the operating-room supervisor, a list of anesthetists who are on call for routine and emergency operations.

The qualifications of the chief anesthetist deserve some attention. The possession of an M.D. or an R.N. degree does not guarantee that the individual can administer a safe and smooth anesthetic. A physician who professes specialization in this branch of medicine should be expected to have had special training for it. This is particularly true since the scope of this work has been broadened to include the administration not only of general anesthetics but also of those injected locally and intra-spinally.

Great differences of opinion exist among hospital administrators concerning the institution's obligation in training interns in the handling of anesthetics. State boards of medical education and licensure in not a few states have come to recognize that the average hospital does not always protect the life of its patients by the careful instruction of interns before they are allowed to give anesthetics. Not only is the instruction of interns in this branch necessary from an intra-hospital standpoint, but licensing boards apparently, and justly,

feel that the hospital owes to the public an adequate training of the members of its intern staff in this subject.

It has been intimated above that it is the duty of the chief anesthetist to undertake this educational work, and it would appear that such a scheme is far more efficient than expecting members of the surgical staff to take their time to give didactic talks on this subject. There is no doubt that it is much simpler to hire trained anesthetists to administer ether than to undertake the instruction of interns in this work. On the other hand, since licensing boards require that hospital superintendents certify as to the scope of this training it becomes necessary for this instruction to be given. The hospital therefore assumes a definite obligation to comply with this ruling in accepting interns for training. Whether members of the intern staff are permitted and required to give anesthetics only to ward patients, while paid nurse anesthetists administer ether to private patients, is a question to be settled by the individual hospital. Whatever scheme is adopted, there are bound to arise not a few practical questions that are extremely perplexing.

When a chief anesthetist discovers an intern who is temperamentally unfitted to administer an anesthetic, a nice problem arises. A death on the table has been known so to upset the nervous balance of an intern that he has found it difficult to re-establish his self-confidence. The chief anesthetist must exercise the greatest tact in the handling of such an individual, and must see that moral support is given the young doctor without visibly offending his dignity. At times, interns are found who do not relish the administration of ether and who try to evade this duty in every possible way.

Others are inattentive, or else they spend too much time in watching the work of the surgeon and thus neglect the safety of the patient. Such an intern, if he is deliberate in his disregard of duty, should not be permitted to administer ether, and the lack of this experience should be communicated to the state board before which he expects to appear for his examination for a license to practice. There is another type of intern who is continually and persistently late for scheduled operations. He should be informed that unless he is present a definite number of minutes before the hour scheduled for the operation, he will not be permitted to gain this experience and hence will be unable to qualify for his license to practice medicine.

Friction sometimes arises when a nurse anesthetist is required to instruct interns and is held responsible for their work in the absence of the chief anesthetist. Young physicians do not relish accepting advice from women who lack both a medical degree and tact in carrying out the duties of their position. Indeed, this is one of the strongest arguments for the creation of the position of chief anesthetist and placing in it a graduate of medicine of some years' standing.

So far as the training of nurse anesthetists is concerned, it is heartening to know that many hospitals have established schools for the teaching of the art and science of anesthesia. This is not only of practical advantage to the surgical field but also injects a beneficial educational element in the work of the operating suite. The curricula of these schools

in some instances have been well thought out, and a course varying from six months to a year in length is given. A diploma is commonly granted at the completion of this experience.

The legality of the administration of dangerous drugs such as ether and chloroform by one who does not hold a medical degree has been questioned on various occasions. It would seem that the surgeon is responsible for the welfare of his patient, and that the authority the anesthetist possesses is one simply delegated to her by the surgeon for the time. She is, at all times, subject to his orders and direction, and is responsible to him and to him only for the welfare and safety of his patient.

Since comment has been made as to the person or persons by whom an anesthetic should be administered, it now seems pertinent to make some statements in regard to the questions of where and how the anesthetic should be administered. The geography of the hospital will determine more or less the question as to where the anesthetic should be given. Careful surgeons often insist that the patient shall be anesthetized in his own room, and that only when consciousness is lost is he to be moved to the operating suite. This is possible in some locations where the operating room is adjacent to the private floors. Most surgeons agree that the mere appearance of capped and gowned doctors and nurses, together with the attendant noises and odors of the operating suite, produces a state of apprehension on the part of the patient that is not beneficial to him. In some clinics, the anesthetizing room is located outside the operating suite so that the patient never sees the personnel and equipment of the room in which he is to receive his surgical treatment. It is the grossest of mistakes, even if the day's operating schedule is overcrowded, for more than one patient to be brought to the clinic before the operating team is ready to begin its work. An arrangement whereby a patient can reach the anesthetizing room without traversing corridors leading into a busy clinic is a good one.

Some anesthetizing rooms are so constructed that their walls are soundproof, the paint and window hangings restful, and the whole atmosphere of the room predisposing to quietude. Flowers, music, and a pleasing personality in the anesthetist are but a part of a scheme to reduce the surgical shock and to hasten the postoperative recovery.

Where surgeons demand speed in placing a patient under an anesthetic, the first stage is often so hastened that harm is done to the patient's mental and nervous makeup. It is the worst possible technique to bring to a tonsil clinic a large number of children, and to allow those who are waiting for their operations to view the struggles or hear the cries of others undergoing the first stage of ether excitement. It should be a rare occurrence indeed when two or more physically strong persons are called upon to subdue a struggling ether patient. Such a happening bespeaks undue speed or lack of skill on the part of the anesthetist.

The records of the anesthetic department should be carefully and completely compiled. An ether chart should present such salient facts as the pulse and respiration rates throughout the whole operation, the blood pressure reading before and during the administration of the anesthetic, the amount of ether consumed, the type of operation performed, the

name of the operator and his assistant as well as the length of time they required to perform their work.

From a financial standpoint, the department of anesthesia is often a paying one to the hospital. Usually when the institution employs an anesthetist, the fee charged for her services reaches the hospital treasury. A difference of opinion has arisen as to whether a surgeon shall bring in his own anesthetist and whether it is proper in this arrangement for the fee to be diverted from the hospital's income. If the hospital possesses a proper anesthetic staff, it would seem that the institution has a right to insist that its surgeons employ these young women on their private cases. To be sure, the skill of such an anesthetist must be a matter that is not in question.

It is not ethical for a physician to refer a patient to a surgeon with the understanding that he be employed to give the anesthetic. This approaches too closely the practice of fee-splitting, and certainly must be looked upon as a *quid pro quo* for referring the case. In some instances, physicians employ graduate nurses in their offices at a monthly stipend. They follow the practice of bringing these nurses to the hospital with them and allowing them to give their anesthetics, for which a fee is charged but which the physician receives. This would not appear to be good practice. If the hospital has an anesthetic department such fees should either be paid to the hospital anesthetist as part of her salary or else should go to the institution. If physicians insist upon bringing their office assistants to the hospital to give their anesthetics on private cases, it would seem fair for the hospital to insist that such persons also administer ether to ward cases from which no fee is expected.

It would seem, therefore, to be good practice for the hospital to employ paid anesthetists to administer ether to both ward and private patients, and it would not seem unjust for the institution to require that surgeons employ these anesthetists in private cases upon whom they operate in the hospital's surgical clinic. No department of anesthesia can deserve its place, or maintain the respect of the staff physicians, unless it is well organized and efficient in operation, and unless sufficient salaries are paid to insure the permanency of its personnel.

4. Safeguarding the Operating Room against Explosions, by Victor B. Phillips*

DURING the past several years the anesthesia explosion hazard has come to be recognized as a matter of first importance in operating-room design and procedure. Numerous articles have appeared on the subject. The National Board of Fire Underwriters has published *Recommended Safeguards* (1929). In 1930 a committee of the American Medical Association published a report entitled *The Hazard of Explosion of Anesthetics*. There have been many explosions, although statistics as to their frequency and seriousness are not available. The danger is real and great. It must be so recognized by everyone who is connected with surgery or has anything to do with the handling of anesthetics. Although the anesthesia explosion hazard is perhaps not great in comparison with the other hazards of surgery, it

* Adapted from *Mod. Hosp.* 46:81-88, Apr. 1936.

is for the most part a preventable hazard, so that no anesthesia explosion or fire is to be condoned.

Proper safeguarding against the anesthesia explosion hazard calls for a full understanding of the subject and of the principles involved, and for ceaseless vigilance on the part of surgical personnel. Nothing in the way of construction or equipment will eliminate the necessity for such knowledge and vigilance. This knowledge must embrace the fundamentals because it is unlikely that any code of procedure can be written to take into account every conceivable dangerous combination of factors. Although the repair of certain of the surgical equipment which contributes to the explosion hazard may be vested in others, it is important that everyone connected with surgery be constantly on the lookout for worn or defective equipment (especially electrical equipment) and immediately call attention to it. Although there may be regular routine inspections by the maintenance department or others, such inspections can never be considered all-sufficient.

An explosion results from the combination of (1) an inflammable gas, vapor, or other substance; (2) oxygen (either pure or in the air) or a gas or other substance which provides oxygen (such as nitrous oxide); and (3) a source of ignition. These factors suggest the fundamentals in all precautionary procedure, namely: (a) handling and using inflammable anesthetics in minimum quantities; (b) minimizing escape into the room; (c) eliminating so far as practicable all possible sources of ignition in anesthesia and operating rooms when explosive anesthetics are being used and, above all, within the anesthesia equipment itself.

All the commoner anesthetics used for general anesthesia in vapor or gaseous form are highly inflammable: ether, ethylene, ethyl chloride, and cyclopropane. Oxygen, nitrous oxide, and air are supporters of combustion. The above anesthetics when mixed with the supporters of combustion are explosive through a wide range of concentrations (see table) and inflammable in greater concentrations. In general, it may be said that concentrations as low as 2 to 4 per cent (authorities differ as to exact low limits) are explosive for the above-mentioned anesthetics.

Ethylene is usually administered in mixtures of 80 per cent of ethylene to 20 per cent of oxygen (and lesser concentrations for obstetric analgesia). This 80-to-20 mixture is approximately at the upper limit of the explosive range. However, at the completion of anesthesia, the ratio of ethylene to oxygen, or to oxygen and air, or to oxygen and carbon dioxide, is reduced down through the entire and wide explosive range. Ethylene diffuses in air readily, having about the same specific gravity as air and consequently there is comparatively little danger of igniting it at more than 10 or 12 inches from the mask or machine, although of course a high velocity stream of the explosive mixture may quite conceivably be projected several feet before dilution below the explosive concentration.

Ether is normally administered from a gas machine in much lower concentrations than ethylene and practically all of these concentrations are within the explosive range. Ether given by the drop method and the resultant mixtures with air are highly inflammable rather than violently explosive. Ether vapor is two and one-half times as heavy as air, so that it does not diffuse readily. This means that the casual mixture with air, in the drop

LIMITS OF INFLAMMABILITY OF ANESTHETIC AND OTHER GASES

SUBSTANCE	FORMULA	MOLECULAR		INFLAMMABLE LIMITS, PER CENT BY VOLUME	
		WEIGHT	ATMOSPHERE	Lower	Upper
Ether	$(C_2H_5)_2O$	74.08	Air	1.85	25.9
Ethylene	C_2H_4	28.03	Air	3.05	28.6
Ethylene	C_2H_4	28.03	Oxygen	3.10	79.9
Propylene	C_3H_6	42.05	Air	2.10	9.7
Propylene	C_3H_6	42.05	Oxygen	2.10	52.8
Nitrous oxide	N_2O	44.00		Noninflammable	
Chloroform	$CHCl_3$	119.38		Noninflammable	
Methane	CH_4	16.03	Air	5.00	15.0
Hydrogen	H_2	1.008	Air	4.00	74.0
Carbon monoxide	CO	28.00	Air	12.50	74.0
Pentane	C_5H_{12}	72.10	Air	1.40	7.5
Ethyl chloride			Air	4.3	14.0
Gasoline			Air	1.4	6.0
Cyclopropane			Air	3.0	8.5
Cyclopropane			Oxygen	2.5	50.00

ether method, may be less complete and intimate. For the same reason, ether is less likely to become diluted to concentrations below the inflammable or explosive range. Instead, it tends to drop to and collect along the floor, or to collect in pockets which may be formed by operating-table coverings and screens. Streams of ether vapor from table down to and along the floor may be easily ignited and will usually flare rather than explode. Such flare is likely to travel back along the ether stream to the patient and anesthesia machine and may result in an explosion.

Cyclopropane (also acetylene and similar gases) has characteristics which are in general more like ethylene than ether.

Chloroform (except when mixed with alcohol) and nitrous oxide are the only commonly and generally used anesthetics which are noninflammable and which therefore do not form explosive mixtures.

Carbon dioxide, if in high enough concentrations, tends to smother combustion, but in the low concentrations usually occurring within the anesthesia equipment and patient's respiratory system, it will not noticeably reduce explosiveness of the anesthetic mixture. Such value as it may have in anesthesia is physiological. Also it may be used to advantage for flushing out equipment after use with inflammable anesthetics.

Following is a general grouping of possible sources of ignition:

1. Any electric spark or arc either from static electricity or from electric circuits. Such electric sparks or arcs, even though minute, are particularly effective in igniting an explosive mixture because of the intensely high temperature and possibly also because of some detonating effect.

2. Open flames.

3. All objects heated to or even somewhat below visible incandescence, such as cauteries, lighted cigarettes, and the like. There is no unanimity of opinion as to the lowest temperatures which will ignite inflammable or explosive anesthesia mixtures. However, it is probably true that any object having a temperature of 400° F. or more is potentially dangerous.

4. Spontaneous combustion. This is more apt to occur under rather considerable pressures. For example, oil or grease in the valves or lines containing oxygen under pressure will usually ignite spontaneously. There have been explosions resulting from the admitting of ethylene by mistake into an oxygen cylinder under rather high pressure, or vice versa.

Of the above sources of ignition, electric sparks from static and from the various electric circuits call for further discussion.

Static electricity is the most insidious and the most dangerous cause of explosions, both inside the anesthesia machine and throughout the operating room. Static is created by friction, chiefly between nonconducting materials, including gases. When so created or deposited on a nonconducting surface, these static electric charges may develop potentials of several thousand volts. These high voltages or potentials are caused by what may be a very small charge which remains closely localized *in situ*, whereas on a conducting surface a similar charge will spread or leak off so that the voltage is dissipated.

In general, the presence of moisture increases electrical conductivity and consequently results in the spreading or leaking off of static charges. Static is most likely to occur in heated buildings in winter for the reason that the outside cold air cannot hold much moisture. When this cold air is heated, the actual moisture content of the air is not reduced but the air becomes capable of absorbing and holding a great deal more moisture. In other words, the relative humidity, which is the ratio of actual moisture in the air to the maximum which it will hold, is greatly reduced. The presence of adequate relative humidity (60 per cent for most materials) in the surrounding air deposits a moisture film on the otherwise nonconducting surfaces and thus serves to prevent or minimize the accumulation of static for nearly all materials commonly occurring in operating and anesthesia rooms and corridors. It should be noted, however, that friction between certain materials results in static which may be retained by these materials at very high relative humidities—85 per cent or more. Hard rubber and wool are such materials. Wool is therefore a dangerous source of static sparks even with relative humidities which will cause static charges on most other materials to leak off readily.

For purposes of safe procedure, it must be assumed that virtually all objects, materials, and gases found in and about operating and anesthesia rooms are potentially hazardous as sources of static sparks. For example, in a rather dry atmosphere the slightest brush of clothing over the surface of a rubber breathing bag will leave an appreciable static charge both on the bag and on the clothing. Dry anesthetic gas or oxygen flowing through a rubber breathing tube will produce static charges in the rubber and in the gas. Persons walking over rubber floors with either rubber or leather shoes and operating tables or other

rolling equipment with rubber tires will all collect static charges unless there is adequate atmospheric humidity to cause the dissipation of these charges. The possibilities of static are too numerous to attempt listing.

Moisture in the air or otherwise applied to nonconducting surfaces, as already pointed out, is an important though not necessarily complete safeguard because in general it provides a conducting path for the spreading or leaking away of the static. By the same token, the use of metallic conductors in intimate and closely adjacent contact with nonconducting surfaces will likewise provide means of dissipating static charges which otherwise would tend to accumulate, closely localized and at high potentials on such surfaces. If these metallic conductors are applied properly on all nonconducting surfaces which are likely to produce or hold static, their effectiveness as a safeguard might approach that of moisture.

The difficult problem, however, is actually and practically to achieve such a result. If even a small area of breathing bag or tube is not in contact with a wire or metal mesh through which to discharge to frame or ground; if a blanket has been brought out of a dry storage room and by slight friction in transit picks up a static charge for which no dissipating conductor is provided, then there may result even greater differences in static potential between objects or between objects and persons than would have existed without such a conductor, especially if that conductor be grounded.

Grounding is an effective safeguard only if thoroughly and consistently applied. This is difficult of accomplishment and furthermore, as discussed in detail later on, involves other hazards which at least partially offset such protection against static as this method may afford.

All electric circuits and electrical equipment are potentially hazardous in the presence of inflammable anesthetics. Such circuits and equipment in modern operating rooms are too numerous to list completely. The following are the more usual: (1) lights and light fixtures, both installed and portable; (2) receptacles and attachment plugs; (3) all switches; (4) all rheostats and adjustable transformers; (5) cords to portable and semi-portable equipment, in fact all cords or wires which are exposed; (6) electrically heated sterilizers (such as an oil type); (7) electric cauteries; (8) head lights and special examination lights (usually low voltage); (9) diathermy and fulguration units, high frequency knives, and similar equipment; (10) x-ray and fluoroscopic equipment; (11) motors of suction units and bone saws; (12) electric cardiograph; (13) telephone instruments, buzzers, bells, and especially telephone magneto ringers. The problem with all this equipment is simply to install such types, and to maintain and to exercise such caution in using them, that none of these sources of ignition can contact the inflammable anesthetic or the explosive anesthesia mixture.

There are various makes of vapor-proof switches, plugs, and receptacles, such that sparks created by making and breaking contacts are completely shielded and protected against contact with the explosive gases and vapors. Light bulbs can be so enclosed and guarded that breakage will not expose the hot or sparking filament. Cords and terminals of portable equipment which are not mechanically protected by conduit or armor or other-

wise are a continual source of danger because of wear and breakage; only ceaseless care and good maintenance will control this. Sliding contacts on rheostats and adjustable transformers are likely to spark and should be entirely enclosed.

Electric cauteries are triply hazardous. First, the heated element is often hot enough to ignite the anesthetic mixtures. Second, the rheostat or transformer for adjustment of temperature is likely to spark. Third, the cord and terminals through frequent use are likely to break or become detached causing an arc or sparking. It is generally recommended that the cautery, as also diathermy and fulguration units, x-ray and fluoroscope, and all similar spark-producing equipment, not be used in the presence of inflammable anesthetics. This is not always practicable. It is submitted here that if the use of an inflammable anesthetic in the presence of such dangerous source of ignition cannot be avoided, then with certain precautions and limitations the operation can be made reasonably safe.

First, however, it must be emphatically stated that under no circumstances can any cautery or other spark-producing equipment be used around the head of the patient or in the pleural cavity when the patient has been anesthetized with any inflammable anesthetic. To do so is criminal negligence, a fact amply proved by many fatal explosions and burns caused in this way. This, at present, leaves only nitrous oxide, chloroform, and local or spinal anesthesia for these cases.

Ethylene, as already pointed out, diffuses readily to concentrations below the explosive range. With a carefully erected screen between the head of the patient and the point of application of the cautery or spark-producing equipment, such as diathermy or fulguration unit, it would appear that the chance of an explosive concentration of the anesthetic reaching this source of ignition is not great, particularly if the room is well ventilated and the ventilation properly directed (from the head of the patient away from the operating table). However, it is doubtless much safer under such circumstances to avoid the use of ethylene or any other inflammable gas which diffuses readily.

Ether does not readily diffuse, but on the other hand it is so much heavier than air that with the protection of a proper and close-fitting screen it will tend to go down to the floor and not along the body of the patient to the point where the cautery or other source of ignition may be in use. In this case it is probably wise to avoid any considerable drafts which might possibly carry the ether to the ignition source. Except for the contingency of such a draft, ventilation is desirable with ether as well as with ethylene or any similar anesthetic, because such ventilation serves to dilute and carry away the anesthetic mixture.

When it is necessary to use a suction unit or bone saw or other motor-driven equipment, it is important that the motor be of a special enclosed type with bearings of proper design and nonsparking materials. Telephone instruments, buzzers, bells, ringing magnetos, and the like should simply not be installed in operating or anesthesia rooms. Uninsulated terminals or other exposed conductors carrying 110 to 120 volts (usual house current) are an unnecessary hazard and should be eliminated. Such exposed terminals often occur in cautery units.

In addition to the above, there is a serious hazard which has rarely if ever been covered

in the literature relating to the operating-room explosion hazard. It is the deterioration or improper wiring of concealed electric wires in fixtures and equipment. The danger exists more particularly in portable equipment and especially in examination lights or other electrical equipment which is frequently washed or sterilized. Due to wear and tear or to water or to the heat of sterilization or to all of these causes, concealed insulation may break down and concealed connections may come loose or wires may even break from frequent flexing. Thus two things may happen: bad sparking or arcing may occur, or the metal shell of the light may become electrically "live."

With the three-wire grounded neutral system so commonly used in light and convenience outlet circuits, the shell of the portable floor lamp or examination light or other piece of equipment may have a potential of 110 volts with reference to any grounded object. If such metal shell comes in contact with such grounded object (and it is frequent practice to have all operating-room equipment grounded) there results a short circuit flash or arc. If any person touches a grounded piece of equipment and at the same time touches a "live" shell or frame a bad shock is the result. Needless to say this is a dangerous source of ignition in the presence of inflammable anesthetics and furthermore may be quite dangerous from the standpoint of shock.

An instance occurred with a floor lamp defectively wired which came in contact at the floor with the grounded frame of an operating table. There was a layer of ether along the floor. The resultant flash happened not to cause damage or injury but was terrifying to operating-room personnel. In another instance, deteriorated insulation inside the shell of a floor-type operating lamp resulted in a bad shock to the anesthetist who simultaneously touched this lamp and the grounded anesthesia machine. In still another instance, a patient received a severe shock from an examination light inside which the insulation had gone bad from repeated washing and sterilizing. In this case the light was a low voltage type (4 volts) operated with a rheostat from the 110-volt light circuit. The rheostat was connected in series on the grounded neutral side of the circuit, so that the potential of the light shell to ground was practically the entire 110 volts. The shell and a nurse who was partly grounded both touched the patient. Although two of the instances cited above caused bad shocks rather than explosions, none the less the conditions were serious potential explosion hazards and might equally well have caused bad short-circuit flashes igniting the inflammable anesthetics.

The condition of the shell of some piece of equipment becoming "live" might exist for quite a long time without being discovered, provided no contact to ground either direct or through a person happened to occur. There is but one way to guard against the above hazard of concealed defective wiring and that is by no means a complete protection, namely, frequent and periodic tests of insulation resistance (with a megger) of practically all electrical equipment, but especially portable floor lamps, examination lights, and head lights. In the case of low-voltage lights, rheostats preferably should not be used, but instead batteries or transformers in which the secondary is metallically entirely separate from the 110-volt primary. Means such as polarized plugs and receptacles for always connecting the rheostat

on the ungrounded side of the building circuit would seem to be a less simple and less sure protection than the transformer just mentioned.

The general grounding of operating-room equipment serves only one purpose and that is the elimination of static. The *Recommended Safeguards*, published by the National Board of Fire Underwriters in 1929, include recommendations that all operating-room equipment be grounded. Numerous other investigators have recommended grounding, even though the operating room be adequately humidified. On the other hand, the report of the committee on anesthesia accidents of the American Medical Association states:

The principal measure heretofore recommended to counteract this risk (static), has been the grounding of the anesthetic apparatus. This, however, is probably of little value unless there are metal strips in the floor which are also grounded. Even this precaution gives at best only an incomplete protection, for the most serious explosions are probably initiated by electrical discharges of static electricity developed inside the anesthetic apparatus itself. Grounding considerably increases the danger of a short circuit from the electrical illuminating current to the patient, surgeon, and anesthetist.¹

At the present time, grounding is a controversial question to which there is no entirely conclusive answer. Unless all equipment and all parts of equipment and all persons are fully and properly grounded, something which is most difficult of accomplishment, there will result marked differences of static potential which may in some instances be more dangerous than with no grounding. A person who has picked up a static charge and who has not dissipated this charge before entering an operating room by touching a grounded plate or other grounded object will usually produce more of a spark in the operating room upon touching a piece of grounded equipment than he would touching ungrounded equipment. Such a slip in technique can easily occur. There is too much of the human element involved to expect grounding to be complete. The danger of short circuits with grounded objects due to defective or deteriorated insulation which is concealed has been pointed out. The use of general grounding as a static preventive greatly increases this short-circuit hazard which involves both the danger of explosion and the danger of shock.

The opinion is submitted here that the present evidence on the whole is against the grounding method whether or not operating-room atmosphere is adequately humidified, but it must be made clear that, in the absence of proper room humidity, the lack of grounding leaves no protection against static developed outside of the anesthesia machine. It means acceptance of one hazard as being on the whole a lesser evil than the other hazards which grounding introduces.

This conclusion makes doubly important the other available protective measures for control of the static hazard: (1) adequate relative humidity in the operating-room air; (2) sufficient well-distributed and directed ventilation; (3) prohibition of wool blankets and clothing or any other materials especially productive of static; (4) above all, proper design and operation of anesthesia equipment to reduce to the minimum the danger of static in-

¹ *J.A.M.A.*, May 10, 1930.

side this equipment. The anesthesia equipment will be discussed first. This will be followed by a discussion of humidity control, ventilation, and the broader subject of air conditioning.

The greatest single explosion hazard is in the anesthesia machine, together with breathing tubes and bags and mask. The chief danger is the generation of static inside this equipment. This results from (1) motion of the parts themselves, the expanding and contracting breathing bag; (2) friction of the gases in motion through the machine and tubes; (3) contact with the machine by persons and other objects including dust covers; (4) the rolling of the machine from one location to another. The nonconducting parts, generally rubber, are the most serious offenders. Static charges, either developed in these parts or deposited on them by the moving gases, tend to remain concentrated in small areas due to the nonconducting material, so that even a small charge so localized can create a high potential sufficient to result in an igniting spark.

If, on the other hand, means are provided for dissipating these localized charges so that they are spread at uniform potential through the entire machine, including the frame, the result is much less dangerous, even though the machine may not be grounded. As previously indicated, the problem is to dissipate or spread these static charges. At the risk of tedious repetition, the methods of accomplishing this in the anesthesia machine will be amplified. These two methods are: (1) adequate humidity both inside and outside the machine; (2) metal mesh in practically continuous contact with all nonconducting surfaces, both inside and outside and with the frame of the machine. Single wires or chains unless very close together are not effective because areas of perhaps several square inches of nonconducting surface remain untouched and a localized high potential charge may possibly be built up and then discharged to the adjacent conductor. The spiral wire commonly used in tubing is likely to break off at its point of attachment to the ferrule at the end of the tube, thus providing a perfect spark gap at the end of a static-collecting wire.

At best, metal wires or mesh or chains are less effective than humidity because the latter permeates to all surfaces, making them conductive. Adequate humidity inside the machine, breathing tubes, and bags is obtainable in three ways: (1) bubbling of gases, including oxygen and air (if used) through water; (2) placing water in the breathing bags and moistening tubes and mask immediately prior to starting anesthesia; (3) using the rebreathing method to the fullest possible extent, thereby retaining the moisture and adding that given off by the patient. The first two of the above sources of humidity will more than likely prove inadequate if rebreathing is not used most of the time. Bubbling gases through water does not necessarily cause the gases to become thoroughly moist. Water in breathing bags will dry up during an extended anesthesia, the moisture being quickly taken up by the continuous supply of new dry gases. Accidents attributed to internal machine static have been so numerous that it is strongly recommended that all three of the above means for maintaining humidity in the anesthesia machine and tubes be regularly used.

As already pointed out, adequate humidity inside the anesthesia apparatus serves effectively to spread internal static uniformly from nonconducting parts to the entire machine,

including the metal frame. It may be argued then that this frame should be grounded to carry away such charges. This is doubtful wisdom for reasons given under the discussion of grounding. The answer then, in the absence of such grounding, is:

1. If, by internal humidity or by metal-mesh conductors over the nonconducting surfaces, static charges are uniformly spread throughout the anesthesia equipment, the resulting electric potentials will be greatly reduced and, further, there should be little or no difference of potential between any two adjacent inside surfaces, thereby virtually eliminating inside sparks.

2. With the entire inside passages of the anesthesia equipment at a different potential from nearby persons and equipment, this potential difference will come to the outside of the conducting metal parts rather than to the outside of the nonconducting parts. To get rid of any such potential difference without spark necessitates either adequate room humidity or a ground connection. Thus, proper relative humidity in the operating room becomes doubly important. In conjunction with proper relative humidity inside the anesthesia equipment, it provides protection for the machine as well as against static sparks elsewhere in the room.

At the beginning of this entire discussion it was pointed out that two of the fundamentals in guarding against the anesthesia explosion hazard are the handling and use of inflammable anesthetics in the smallest possible quantities and the minimizing of the escape of the anesthetics into the room. It may well be repeated that the use of the rebreathing method to the maximum extent consistent with other requirements accomplishes these fundamental purposes and at the same time serves to keep the inside passages of the anesthesia equipment thoroughly moist and therefore reasonably free from dangerous static potential differences.

Even though the rebreathing method be used to the fullest extent, there still remains a distinct hazard at the end of the anesthesia period when the mask is removed. The patient is then breathing out into the room a highly explosive mixture in considerable quantities, and a similar mixture is likely to escape from the breathing tubes. Great care should be exercised at this time to permit no sources of ignition anywhere near the patient. It should prove a worthwhile safeguard to close the mask promptly with a moist rubber cap (or otherwise) and as soon thereafter as possible to flush out the machine and tubes with carbon dioxide.

It is of great importance in the design of the anesthesia machine that reducing and mixing valves be such that there is no possibility of any of the inflammable gases mixing at high pressure (cylinder pressure) with oxygen or nitrous oxide, the result of which would almost certainly be an immediate explosion. It is perhaps needless to say that the anesthesia machine, tubes, and mask must be kept tight. There is likely to be enough hazard in the exhalation of the explosive mixtures during induction and at the end of the anesthesia period upon removal of the mask without adding the hazard from leaking apparatus and mask.

In view of the great importance of maintaining proper relative humidity and securing

proper ventilation in operating and anesthesia rooms, it would appear to be in order to discuss briefly the general subject of air conditioning. A modern system of complete air conditioning involves: (1) temperature control; (2) relative humidity control; (3) uniform and adequate circulation and ventilation; (4) cleaning the air and possibly removing wholly or in part certain noxious gases, such as sulphur dioxide which occurs quite generally in some quantity in many soft-coal-burning districts. Two of the above (humidity and ventilation) are practically indispensable to the proper safeguarding against the anesthesia explosion hazard. The third, temperature control, goes hand in hand with relative humidity control. These same three also govern the rate of heat liberation from the human body and consequently determine bodily comfort. The importance of cleanliness, especially in operating rooms, calls for no amplification.

With an air-conditioning system, the air supply may be all fresh outside air with the exhaust fans discharging entirely to the outside, or for purposes of economy some of the exhausted air may be recirculated through the conditioning equipment, thereby conserving heat in winter and refrigeration in summer. For operating rooms, it is important to get rid of the anesthetic gases. Therefore recirculation, except possibly for a small portion of the air supplied, is undesirable.

Proper circulation and distribution of air are important. Such distribution is accomplished first by directional supply grilles, having many small fins or blades set at varying angles which cause the incoming air to spread out and not be concentrated in a narrow high velocity stream causing drafts, and second by an exhaust system which draws the air out of the room. The location of the exhaust openings with reference to the supply openings is obviously something which must be carefully determined for each room. In operating rooms it is desirable for reasons already indicated to have the direction of circulation such that explosive gas mixtures from the anesthesia machine and head of the patient are carried away from the operating table where cauteries and spark-producing surgical equipment may have to be used.

Complete air conditioning is expensive and yet for operating rooms it is difficult to conceive of a more thoroughly justifiable expenditure. It provides a safeguard against the anesthesia explosion hazard for which there is no substitute. Operating rooms are more often than not uncomfortably hot because of the sterilizers. They are generally stuffy and filled with the odors of anesthetics. These conditions are subversive of the best work on the part of the surgeon and other operating-room personnel. A complete and well-designed air-conditioning system corrects these conditions, but it is important to understand that every installation calls for a thorough study by a competent engineer and careful selection of types of equipment and arrangement to suit the requirements of the individual case.

Where it is temporarily impossible for financial reasons to install an air-conditioning system (with or without summer cooling), the next best thing from the standpoint of the anesthesia explosion hazard is to install humidifiers, of which there are various makes and types on the market. Steam from sterilizers must not be depended upon for adequate relative humidity. Preferably these humidifiers should be automatically controlled by humidi-

stats, but if this is not done, then they may be manually controlled by constant reference to hygrometers (instruments indicating relative humidity). There should be a hygrometer in every operating and anesthesia room and in the adjacent corridor, regardless of whether humidity is provided and automatically controlled by an air-conditioning system or otherwise.

Nov. 7, 1940. Supplementary Note on the Operating-Room Explosion Hazard

The above article was written early in 1936. Since that time, there has been further research on the subject, largely as a result of a number of serious explosions.

It has been found that even with 60 per cent relative humidity, quite high electrostatic voltages may be developed on equipment or clothing under certain conditions. This by no means invalidates the great value of proper relative humidity as a safeguard against static sparks. It does mean, however, that proper relative humidity is not as complete a safeguard as previously regarded. Furthermore, it has been found that the amount of carbon dioxide present in the operating-room air has a very marked effect upon the efficacy of relative humidity. This is, of course, due to the fact that some of the carbon dioxide in the air will be dissolved in the moisture film which proper relative humidity deposits on various surfaces, thereby raising the conductivity of the film and thus more effectively dissipating static charges.

In the above article it has been pointed out that the chief source of static hazard has been the nonconductive surfaces, more particularly the rubber tubes and breathing bag of the anesthesia machine and, by the same token, such items as rubber-soled shoes, rubber tires on casters, rubber flooring, and the like. It has been pointed out that even though the quantity of static electricity generated be very small, the resultant potential might be on the order of hundreds or even thousands of volts due to such charge remaining *in situ* within a small localized area. An equal quantity of static electricity imparted to a conductive surface, on the other hand, would develop little or no appreciable voltage, due to its being spread or dissipated over a relatively large area.

From this it is apparent that the nonconductive quality of rubber (as well as certain other materials) has, in no small measure, contributed to the difficulty of guarding against static sparks. As a result of this situation, certain of the rubber companies have recently developed what is known as "conductive rubber" and it is now possible to purchase breathing bags, tubes, and masks for anesthesia machines made of this conductive rubber. It is also possible now to purchase conductive rubber flooring, caster tires, and shoes, or, if not the entire shoe, at least a conductive rubber strap which may be fastened to the bottom and side of the shoe.

The introduction of conductive rubber into the operating room, if consistently carried out, has a very material bearing upon the question of equipment and personnel grounding. In the above article the conclusion was reached that, on the whole, grounding as a means of dissipating static electricity introduced more of a hazard than that which it endeavored to eliminate. One reason for this conclusion was that, with certain objects grounded, there

might result greater differences in static potential than would result if such objects were not grounded, and it was pointed out that complete grounding was all but impossible, due to the presence of nonconductive surfaces.

If conductive rubber be consistently used for floors and for the replacement of all rubber parts, it follows that the previous danger of electric charges remaining localized at high potentials on these particular nonconductive surfaces is largely eliminated. So far as static is concerned, if all surfaces in the operating room are made conductive, it follows that there will be sufficient dissipation of any static developed so that static will cease to be the problem it has been where considerable areas of nonconductive material existed. In other words, from the standpoint of static, grounding would cease to be important one way or the other.

The use of conductive rubber is a long step in this direction but by no means a cure-all because there are still such nonconductive items as blankets, clothing, covers, etc. In general, however, if the rules given in the above article be vigorously followed in prohibiting silk, wool, and rayon (except for underclothing), and if proper relative humidity be maintained, it may be said that these latter nonconductive items do not introduce very much of a hazard.—V. B. Phillips.

5. Cost Control by Surgical Supervisors, *by Nellie Gorgas**

THE supervisor in the operating room has, in addition to her responsibility for the care of her patients, a definite responsibility for controlling costs in her department.

In the University of Chicago Clinics it is felt that control by budget is one of the most important of methods; it can provide regularly and accurately to the administrator and the department head a definite measure of control so that changes may be made before it is too late. Accordingly, each year a budget is set up for the operating rooms in the University of Chicago Clinics after the director or his assistant has consulted with the chief anesthetist and the superintendent of nurses. The superintendent of nurses has, of course, discussed the matter with her operating-room supervisor. An estimate of appropriations needed for salaries and supplies for the coming year is made up as accurately as possible on the basis of current activities, past records of achievement, and any changes in demand that can be foreseen. Comparative statements, such as Chart 1, are useful as a basis for the calculations for the next year. If new facilities are to be added, such as air conditioning or a new operating room, estimates of their costs must be taken into consideration. While it is time consuming to obtain detailed estimates for structural changes and for equipment and supplies as well as for staff needs, hospital directors today are insisting upon knowing all the facts before making appropriations.

As soon as possible after the board of trustees has made its plans, the chief anesthetist and the nursing supervisor should be informed of the exact appropriation for the next year. From then on it is their responsibility to see that costs are controlled so that appropriations are not exceeded illogically.

* Adapted from *Mod. Hosp.* 53:83-85, Sept. 1939.

CHART 1. COMPARATIVE COSTS IN OPERATING ROOMS, 1936-1939

For Use in Establishing Budget for Next Fiscal Year

ACCOUNT	1936-7		1937-8		1938-9*		COMMENTS	ESTIMATE 1939-40
	Total 3315 operations	Per operation	Total 3461 operations	Per operation	Total 3572 operations	Per operation		
Salaries, general	19,631.24	5.92	23,675.84	6.84	27,007.80	7.56	Salary rate increase	28,000
Salaries, anesthesia	8,401.16	2.53	6,015.00	1.74	7,366.44	2.06	Replacement to be made	7,000
Supplies & expense, general	10,443.03	3.15	11,919.46	3.44	12,870.36	3.60	Must be reduced	12,000
Supplies & expense, anesthesia	3,354.70	1.01	2,955.13	.85	2,409.72	.67		2,500
Maintenance of interns	1,473.68	.45	2,321.28	.67	2,249.88	.63		2,300
Overhead	12,837.15	3.87	16,033.16	4.63	16,216.44	4.54	In departmental budgets	16,200
Total	56,140.96	16.93	62,919.87	18.17	68,120.64	19.06		68,000

* On basis of 7 months.

CHART 2. MONTHLY REPORT ON COSTS IN THE OPERATING SUITE: JANUARY

ACCOUNT	JULY 1 TO JANUARY 31				COMMENTS
	Actual	Pro rata	Difference	Actual	
<i>For supervisor:</i>					
Salaries, general	2,167.90	2,683.57	-515.67	15,754.56	Consistently under on salaries
Supplies & expense, general	1,307.99	1,166.68	141.31	7,507.74	Some of stock replenished for 6 months
<i>For Chief Anesthetist:</i>					
Salaries, anesthesia	701.00	601.50	99.50	4,297.06	Replacement before year is over
Maintenance of interns	162.31	250.00	-87.69	1,312.43	Conservative and cooperative staff
Supplies & expense, anesthesia	176.92	200.00	-23.08	1,405.70	Cutting down overdraft
<i>For administrator:</i>					
Total direct costs	4,516.12	4,901.75	-385.63	30,277.49	Will show up in departmental pro rata
Overhead	1,341.05			9,459.59	

A monthly report (Chart 2) from the accounting office has been instituted in the University of Chicago Clinics to inform department heads and the administration of the actual expenditures for the month in each separate account and of the cumulated expenses since the beginning of the fiscal year. It also shows the amount which, according to the adopted budget, should have been spent, upon the assumption that one-twelfth of the annual appropriation is to be spent each month. The last column of the monthly report shows how much the expenditures are over or under the budget pro rata at the end of the month covered by the report. These "overages" are investigated carefully each month by all concerned in the control of costs.

The costs in the operating suite are divided into the following: (1) general direct charges, including salaries of nurses, orderlies, attendants, and clerks, and supplies and expenses; (2) anesthesia charges, including salaries of anesthetists and the anesthesia resident staff, cost of maintenance of resident staff, and anesthesia supplies and expenses; and (3) overhead charges such as steam, electricity, repairs, housekeeping, laundry, insurance, and administration. The last named are charged on a pro rata basis as portions of total maintenance, laundry, housekeeping, and administration.

Inasmuch as the items included in overhead are primarily the responsibility of other department heads, such as the engineer, housekeeper, and administrator, the operating-room supervisor is not informed directly of these costs each month. When one of these other department heads, however, finds the services of his department being called upon out of the ordinary, he consults the supervisor and together they try to correct the condition. The chief anesthetist is held responsible for all anesthesia costs. The direct responsibility of the operating room is then only for the costs of general salaries and expenses. The salary appropriation is definitely allocated to (1) the individuals on the permanent pay roll of the department when the budget estimate is prepared and (2) a temporary pay roll item to cover extra help during vacations or sick leaves. The permanent pay roll item leaves little opportunity for control; a standard amount of staff help is provided for. No extra nurses, orderlies, attendants, or clerks may be added because there are definite regulations in the accounting office that, after the budget is adopted, only replacements may be entered on the pay roll, that each new entry card must show the name of an employee who is to be removed, and that the new salary must be equal to or less than the old one. In the matter of the temporary pay roll, however, the supervisor may use control by replacing absent or sick staff members only when absolutely necessary.

The scheduling of duties and the policies in regard to personnel are important in controlling temporary pay roll costs. In the University of Chicago Clinics, although a twenty-four-hour service is maintained in the operating suite, the normal day's work is finished by six o'clock each evening. After that, only real emergency operations are performed. Staff members, in rotation, are on call for return for night duty. Since they live out of the hospital, taxi fare is provided for them and their time on night duty is made up at the first opportunity. Thus, an adequate staff is provided for twenty-four-hour duty at a minimum of salary expenses without imposition on anyone.

Another method of controlling temporary pay roll costs is to have available elsewhere in the organization well-trained personnel who may be transferred to the operating rooms in time of need. There are practically always some requests on file from staff nurses and supplementary workers who wish to be transferred to the operating rooms. It is good practice to transfer them one by one, allowing the older operating-room staff members to return to work in other parts of the hospital after about two years in the operating suite. Fully trained in the technique on the floor, these staff members are then available for vacation and sickness relief.

In the matter of supplies and expenses, the supervisor cooperates with the administration in effecting economical purchase and use of items. Responsibility for the routine replacement of supplies on the floor lies with the supervisor, after a standard inventory has been decided upon by her and the administrator, and after economic purchase quantities have been set up on the basis of usage, quantity discounts, and investment and storage costs. Replacement of minor instruments and pieces of small equipment is usually approved routinely by the administrator. Any change in type of instrument or other supplies, however, must be cleared with him.

The supervisor is in the best position to know the total needs of the surgeons and to obtain the cooperation of the various services in using a single item that will serve the purposes of all. She also is in a position to work with the chief surgeon and the chiefs of all services to schedule the periods assigned to each service properly so that the same items of special expensive equipment will not be needed at the same time and will not have to be carried in double or triple quantity. This is somewhat of a Chinese puzzle at times, especially in a teaching institution in which class time, out-patient clinics, and research programs all must be considered. But with diplomacy and determination a feasible program may be devised.

The supervisor may obtain cooperation of the staff in working out a definite schedule of supplies to be provided for operations on each different service. Chart 3 shows the standard set-up of both staff and supplies for an emergency operation. While the number of supplies is not definitely limited, because primary consideration is always given to the patient, a schedule does provide the initial set-up for the routine case. It is a practice in our clinics for either the supervisor or the head nurse to see each patient personally before anesthesia is begun so that she can see for herself, from the patient's condition, what emergencies are likely to arise and can arrange to have readily available whatever extra equipment or supplies may possibly be needed to meet these emergencies. A standard set-up, too, makes it relatively easy for the staff to lose no time in finishing one operation and beginning the next. The use of an anteroom in which the anesthetic may be administered will conserve space; by cutting down the time for each patient in the operating room, more operations may be performed in a given number of rooms. Cost of maintenance of space in a hospital increases materially with each additional cubic foot, so the supervisor must make economical use of each inch.

The interest and cooperation of the staff are essential if "adequate" supplies are to mean

the least amount that is adequate and economical. By watching her operating schedule day by day, the supervisor may compute certain weekly standard orders and then adjust them in accordance with the varying number of major and minor operations coming to the floor each day.

CHART 3. COST OF AN EMERGENCY APPENDECTOMY

Staff: 1 operating nurse, 1 circulating nurse, 1 orderly, 1 anesthetist and 4 doctors

2 nurses (\$105 a month) 46c an hour	\$0.92
1 orderly (\$80 a month) 37c an hour .....	.37
Ethylene .....	.35
Novocain crystals .....	.225
Anesthetist	1.77
Laundry, 42 pounds @ \$.027	1.134
4 doctors' suits; 5 doctors' caps (1 for orderly); 3 nurses' dresses; 3 nurses' caps; 8 masks; 1 lifter; 2 pillow slips; 17 towels; 5 large sheets (stretcher and table); 2 lap sheets; 1 table pad; 2 small sheets; 5 glove towels and envelopes; 5 gowns; 6 lap sponges; 1 blanket; 1 tray cover; 1 large bag; 2 small bags; 2 large wrappers; 1 small wrapper.	
5 dozen sponges @ \$.008 each .....	.48
5 tubes, catgut @ \$.19 each .....	.95
Skin silk .....	.10
3 knife blades @ \$.125 each .....	.375
Iodine, 60 cc. ....	.052
Alcohol, 250 cc. ....	.087
	<hr/>
	\$6.813
<i>For Preparation</i> (cleaning and setting up)	
2 nurses (one hour) .....	.92
1 orderly (half hour) .....	.185
1 attendant (half hour) .....	.155
	<hr/>
	\$8.073

Not included: Gloves (mending and preparing), needles, repair of instruments, replacement of new equipment, head nurse and supervisor, making of supplies, packing drums, wrapping packages, solutions.

The definite allocation of specific responsibilities to each member of the staff is another method used by efficient supervisors to control costs. By repetition, one becomes so familiar with the work that it is comparatively simple, for instance, to sort out instruments beginning to need repair so that major repairs and replacements may be avoided later. Equipment, such as sterilizers, will be kept in much better condition when the worker is familiar with it and knows he is to continue to have to use it.

Equipment must also be safeguarded physically. All equipment put into use must be checked to see that it is returned in good condition to its own place and is properly locked

up in one of the cabinets to which the supervisor should have the only key. A monthly physical inventory should be taken.

Month-by-month conformity of actual expenditures with the budget pro rata cannot always be expected. A cumulative figure as the months go on is more reliable. Rightfully, if the departmental work is at all seasonal, the total budget appropriations should be apportioned on the basis of a seasonal index. Otherwise, when the peak load comes late in the year, one may unexpectedly find that, although expenses have been running consistently within the limits, they will leap suddenly above the pro rata and may even bring the total for the fiscal period so high as to make it impossible to come out even for the year. A large bill for a special item of equipment may send expenses above the pro rata. This cannot be taken too seriously because when the special expense has ceased and the normal rate of expenditure is resumed, the "overage" will eventually iron out and, before the year is over, total expenses will be within the appropriation. This is the case shown in Chart 2 in which anesthesia salaries are more than the pro rata. During the first part of the year, there were on the pay roll a high-salaried anesthetist and a junior one in training to replace her. The junior will receive some increase in salary and will be replaced by an intern without salary. Hence, the monthly pay roll will be considerably less during the last few months of the year and the total will approximately equal the estimate for the year.

The administration holds the supervisor responsible for helping to locate the reason for any excess in expenditures over pro rata and for correcting it if it is within her province, or for giving the administration complete data if the cause is something beyond her control. This may be an increasing demand for service or an epidemic of illness. The administration may have to have the appropriation increased to cover the revised estimate; or it may be able to eliminate the excessive demands, to institute better health service, or to improve certain of its purchasing procedures. No matter what course the administration takes to remedy the situation, it is obvious that without the specific data as early as possible in the proceeding, control of the situation may be lost to a serious extent. It is obvious, then, that the supervisor is essential in the program of control of costs in the surgery.

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CHAPTER IX. OBSTETRICAL SERVICE

1. The Role of the Hospital in Reducing Maternal Mortality, by *Arthur W. Bingham, M.D.**

THE responsibility of the hospital in maternal welfare is increasing each year for the following reasons: (1) more obstetrical patients are being cared for in hospitals every year; (2) the well-organized obstetrical hospital unit is the ideal place to conduct an obstetrical case. It is therefore important at this time for every hospital admitting obstetrical cases to check its equipment and personnel in order to make sure they are adequate for the proper care of these patients. Public opinion is becoming more and more in favor of the hospital as the safest place for maternity care. It is up to the hospital to provide that safety. Of the patients treated by the Maternity Center of the Oranges (New Jersey) in 1923, 25 per cent were delivered in hospitals; in 1936, 83 per cent. In East Orange in 1936, 90 per cent of the births were in the hospitals; in Newark 85 per cent.

The fact that in certain sections more maternal deaths may have occurred in hospitals than in the homes only shows that when a case becomes serious the patient is sent to a hospital while if normal she may remain at home. Few give any consideration to the idea that if she had been in a hospital the complication might not have been so serious.

In planning and organizing an obstetrical department the following points should be kept in mind:

1. Isolation from other patients, preferably in a separate building. A separate building is the ideal arrangement. The private rooms and wards must be isolated from other departments. The delivery rooms should not be in the same unit with the operating rooms as is frequently planned; they should be in the obstetrical department, entirely away from surgery. They should be in a group with labor rooms separated from the private rooms and wards by soundproof partitions. The hospital which treats maternity cases in close proximity to other patients is not giving the patient a fair chance. It may be a question of finances but the necessary funds can usually be obtained if the public is acquainted with the need. Do not be satisfied until your hospital has an isolated obstetrical unit.

The nursing staff must be separate and nurses in other departments should not be allowed to visit the obstetrical unit. Isolation is imperative for safeguarding the obstetrical patient.

2. Supervision of the department by a competent obstetrical staff with provision for an ample courtesy staff of general practitioners. Whether large or small, the obstetrical department must have supervision. The obstetrical hospital can best serve the community by having a large courtesy staff of general practitioners who can bring their patients and treat them under supervision. The closed hospital may have better statistics but it is not aiding

* Adapted from *Hospitals* 11:83-86, Nov. 1937.

the campaign for better obstetrics to the fullest degree. If the general practitioners are not allowed to attend cases in our hospitals they must take them to nursing homes or keep them in the home. In neither of these places will they get any supervision. By attending cases in a supervised hospital, the physician constantly adds to his knowledge of obstetrics. The contact is educational and reacts favorably on the patient as well as the physician. It is one of the important factors in promoting maternal welfare.

3. Standard routine procedures to be adopted by the obstetrical staff and followed by all physicians attending cases, both ward and private. So many obstetrical cases are normal that routine procedures can easily be carried out. They greatly facilitate the nursing efficiency and make it possible for a nurse to care for more patients. The procedures should be plainly posted on each floor so that attending physicians may see what is being carried out. The patients appreciate that there is less friction when routines are used. Of course in special conditions special orders may be given. In the Orange Memorial Hospital recently there were 19 patients on one floor attended by 17 different physicians. There was no confusion, for routine procedures were being followed.

The Committee on Maternal Welfare of the Medical Society of New Jersey recommend the following rules to be carried out in every hospital in the state taking obstetrical cases:

- a. Gloves must be worn for all examinations and deliveries; hands must be scrubbed for five minutes before putting on gloves.
- b. Do as few vaginal or rectal examinations as possible.
- c. Except in postpartum emergency, the doctor must be present when pituitrin is given. If given antepartum, the dose must not exceed Mv, and the patient must be on the table ready to deliver. Reasons for giving pituitrin must be recorded.
- d. The obstetrician, anesthetist, and nurses must wear masks during examinations and delivery.
- e. All cases of infection to be transferred from the Maternity Department.
- f. No douches or intravaginal treatments should be given in the maternity section.
- g. All normal babies are to be put on the regular feeding routine.
- h. All circumcisions must be done with strict surgical asepsis. Hands must be washed the same as for any other surgical procedure.
- i. Consultation with a competent consultant is required in all of the following cases: (a) all prolonged labors (24 hours); (b) cases requiring cesarean sections; (c) breech presentations (unless very premature); (d) difficult forceps cases or versions; (e) occiput posterior presentations requiring forceps or version; (f) other complicated cases: eclampsia, placenta previa, etc.

4. Rules requiring consultation in abnormal cases. This is a very important provision. If each physician is going to treat his abnormal cases as best he can without advice or assistance, progress will be very slow indeed. Under the protection of the hospital he will undertake procedures he is unable to carry out without disastrous results. Consultations should be free unless the patient is well able to pay a moderate fee. For the sake of maternal welfare, petty jealousies must be put aside and a helping hand given to any physician who

needs it in an abnormal case. In some hospitals the rule is to call a member of the obstetrical staff, while in others any competent consultant may be called. The calling of a consultant in an abnormal case not only helps the patient but gives the physician a practical demonstration in obstetrics. When once this custom is established there will be very little trouble in enforcing the rule.

5. Provision for isolation of infected cases. If a case is infected on admission or becomes infected, it must be taken from the obstetrical department unless in a larger hospital there is a special place provided for such cases. As a rule it is safer to move the patient to the general medical or surgical department to avoid contamination of the normal obstetrical patients. There should be a special isolation nursery with cubicles for babies with sore eyes, syphilis, impetigo, or other infections. They should be attended by special nurses wearing a separate pair of gloves for each case, and gowns as well as masks should be worn by all entering this nursery as in other nurseries.

6. Adequate records kept in order to study cases and tabulate results in the annual report. The record sheets should be concise but containing all the essential information. If the records are too complicated it will be difficult to get the courtesy staff to fill them out properly. If a physician is not willing to keep a reasonable record he should be denied hospital privileges. Records should not be filed away until completed. Every hospital should make out an annual obstetrical report so as to properly evaluate its results. In New Jersey, the Maternal Welfare Committee receives an annual report from every hospital in the state taking obstetrical cases.

7. Obstetrical staff conferences held regularly and open to all physicians interested. Monthly conferences are most valuable as here details are discussed regarding causes of complications, how to prevent them and how to treat them, as well as reasons for maternal deaths. Any physician may occasionally make an error in judgment or technique but if he attends such conferences he is less likely to do so. Attendance in some hospitals is made obligatory for courtesy staff as well as regular staff members.

8. Prenatal clinics as part of a comprehensive community system of prenatal care. The hospital which treats in its clinic only those cases which are to be cared for in its ward is only partially doing its duty to the public. The community maternity center consists of a visiting nursing association working in conjunction with hospital or other prenatal clinics. The organization is responsible for all the public prenatal work for the community. The prenatal clinics may be in different hospitals, all part of the same organization.

The prenatal work is divided between prenatal clinics and prenatal nurses in the field. This method, modeled from the Maternity Center of New York City, is well suited for suburban or rural communities where there is not enough work for more than one or two clinics and where distances prevent patients from making regular visits to the clinic, but it may be adapted to any municipality by simply multiplying the units. The nurse who is specially trained in prenatal work goes to the home of the patient, takes the blood pressure, makes a simple urinalysis, gives advice, and leaves printed instructions. Four or five times, or oftener if necessary, the patient is sent to the clinic. There she is examined by a physician

to determine the presentation of the child and size of pelvis. The heart, lungs, teeth, and tonsils are examined, the weight and blood pressure are checked, a complete urinalysis is made, and a Wassermann taken. A complete history is recorded. The patient has a history card on which the nurse records her findings and which the patient takes to the clinic so the doctor may add his record. The card is taken to the hospital if the patient goes there for confinement or if remaining at home she will have it there for the convenience of her physician.

There are four groups of patients: Group 1, those who intend to go to a hospital; they will be cared for and referred to any hospital they wish to enter. Group 2, those who have engaged a doctor or intend to have one but are having no prenatal care owing to the oversight of the doctor or the patient's inability to pay for it. Group 3, those who intend to have a midwife. These patients are watched carefully for complications and if any arise the condition is tactfully explained to the midwife and patient, and hospital care is advised. In case a physician or midwife has been engaged, their consent must be obtained before the patient is listed for treatment and any abnormalities reported to them. Group 4, those who have not made any arrangements; these patients are advised regarding their condition and referred to a hospital or to a physician interested in obstetrics.

No patient who has a physician is given prenatal care without the physician's consent. No patient who can afford a physician is referred to a hospital for confinement unless abnormal conditions are found, and then only after consultation with the physician or midwife in charge. By means of this simple scheme the obstetrician at the clinic and the prenatal nurse in the field work together as part of the same system keeping in touch with the patient wherever she may live yet not interfering with her plans for her confinement. The points suggested are no theories but are being carried out in many hospitals today. Yet, I am sure, there must be some hospitals which will require considerable overhauling before they will fit into the scheme suggested.

Having delivered many patients in the home in former days I am well aware of the advantages and disadvantages. Compared with the first-class obstetrical hospital there are no advantages in home deliveries. To be sure, some patients might be more comfortable at home but no amount of comfort will make up for faulty technique with resulting complications. There are many disadvantages except possibly in rare cases where practically everything has been brought into the home, including assistants. As very few patients can afford this, it need not be considered.

Some of the disadvantages are: (1) low, soft bed to work on unless a table has been procured; (2) poor lighting facilities, seldom in the right place; (3) very little at hand for emergencies; (4) impossible to make a good repair unless extra equipment and assistants are brought in; (5) almost impossible to carry out aseptic technique; (6) modern apparatus for resuscitation of baby not at hand; (7) equipment for combating hemorrhage not at hand. Why subject the patient to the risk?

Any community which has an adequate community obstetrical hospital unit and a community maternity center has taken important steps in advancing maternal welfare. Organ-

ized maternal welfare work in New Jersey began in the Oranges in 1921 when the Maternity Center Association of the Oranges and Maplewood was organized. Two years later, in 1923, the Essex County Maternal Welfare Commission was appointed by the Essex County Medical Society. Since its organization, the maternal mortality in Essex County (the largest county by population in the state) has dropped from 6.9 to 3.5 per thousand live births. On account of these results, the Medical Society of New Jersey appointed a committee on maternal welfare in 1931. The state committee aided in organizing maternal welfare committees in every county and directed the maternal welfare work of the state. Included in its activities is the investigation of every maternal death in the state. Since 1931, the uncorrected maternal death rate has dropped from 5.9 to 3.7 per thousand live births. During the past eighteen months, the State Department of Health has cooperated with the State Medical Society in giving financial aid to this work with funds received through the Social Security Act.

Not many years ago, all kinds of surgical operations were performed in the home. Now this is done only in a rare emergency; so with obstetrics. The place to handle an obstetrical case safely and efficiently is in a first-class obstetrical hospital unit. The drawback is that there are not enough of them. Let us have more of these units so that every expectant mother will have the opportunity of being cared for under the best possible conditions. Educate your community to back up this proposition. Maternal welfare work is being carried out all over the United States. Let the hospitals get in the front line and equip themselves to do their part in raising the standard of maternity care. It will take initiative, work, time, and money; but *it will save lives*.

2. What the Superintendent Should Know about the Maternity Unit*

THERE are two plans for the medical staffing of the maternity department. In the first there is a specialty hospital staff made up of physicians ranking high in the practice of obstetrics and gynecology. No other community physicians are permitted to practice in these hospitals. All patients are referred either by outside physicians or by the offices of the appointed staff. In another type of hospital there is an appointed staff and also a more or less loosely organized courtesy staff. In still another type no staff is appointed by the board of trustees but all accredited physicians in the community are permitted to practice institutional obstetrics therein.

The management of the courtesy obstetric staff presents many difficulties. Physicians appointed to this group should be carefully selected. Application forms setting forth professional and personal qualifications should be required and these should be scrutinized by the qualifications committee of the appointed staff. Courtesy privileges should be granted upon recommendation of this group, by the medical officer in charge of the hospital, by the board itself, or by all three. All members of this staff are not equally qualified to perform the major and minor procedures necessary to the delivery of the pregnant woman. In most

* Adapted from *Mod. Hosp.* 45:77-79, Nov. 1935.

institutions a division of privileges is made, these being classed as normal and as full obstetric privileges. The crux of the situation centers about the description of these classifications. The privilege of practicing normal obstetrics is usually granted to the family practitioner, the type of physician who has not been given an opportunity to perfect himself in such complicated procedures as the application of high forceps and the performance of version and cesarean section. He is permitted to employ low forceps, to repair first-degree tears, and, rarely, to perform versions.

It is of the utmost importance that careful scrutiny be given to the qualifications of physicians who desire full obstetric privileges. Usually only physicians who are on the major staff of other hospitals or who hold positions on a medical teaching staff or have definitely specialized in obstetrics are granted full obstetric permission. Even with such a carefully worked-out classification, difficulties are certain to arise. A physician possessing but normal obstetrical privileges finding delivery delayed is inclined to request high forceps for application, to attempt to perform a version, or even to schedule a cesarean section. No hospital is performing its full duty to its community which permits a physician with uncertain training to endanger lives by attempting procedures for which he is not prepared.

It becomes necessary, therefore, to draw up rules governing the practice of this first group. Many institutions require that in all cases where labor is continued longer than eighteen hours, a consultant from the regularly appointed staff must be called. This consultant usually serves without fee and his service to a less experienced colleague is considered as part of his general obligation to the hospital. In some cases, such a consultant may charge a fee if the patient is able to reimburse him. When such is the case, he should be permitted to submit a bill. It is also frequently stated that no intern or resident physician may deliver a private patient of the courtesy staff. There is sometimes a tendency on the part of the latter to step aside and allow the younger, though well-trained, obstetricians to assist them when difficulties arise.

Strict observance of rules as to gowning, scrubbing, and hand washing should be required of the courtesy staff. The execution of all prenatal records should also be strictly required of this group. Gowning before entering the nursery is considered a basic and important regulation. The relation of the courtesy staff to the appointed staff, therefore, consists of a friendly spirit of cooperation with not a little of a general supervisory status being also present on the part of the latter. Sometimes the courtesy staff has an organization of its own with an elected chairman and secretary. When such is the case, communications relative to matters affecting this group are easily made.

Where a large group of courtesy physicians are to be found, such as is the case of one eastern hospital of 400 beds where 125 physicians are members of this staff, difficulties of supervision are certain to arise. It is questionable whether there is any real necessity for the existence of a staff of this number. Investigation often discloses the fact that many of these physicians deliver few patients during the course of a year in the hospital on whose staff their names are to be found. It seems more expedient for the courtesy staff to consist of physicians who deliver a certain minimum number of patients annually at the hospital.

Those desiring the assistance of the institution only occasionally might be granted temporary privileges or courtesy cards as needed.

It is more difficult to control the family-practitioner type of physician who employs the maternity department of a hospital which has no regularly appointed staff. The fully open hospital should require some type of staff organization even though it be of a rather flexible type.

In institutions possessing a regularly appointed staff, the members are likely to rank as both obstetricians and gynecologists. Difference of opinion often arises as to need of a gynecologic staff. In some high-grade hospitals gynecology is practiced by the general surgeon on the contention that the pelvic brim is but an imaginary line which, like the equator, divides the northern hemisphere of the surgeon from the southern realm of the gynecologist. In rebuttal the latter insists that the surgical treatment of diseases of the pelvic organs represents a strict specialty and that the surgeon is less inclined to perform creditable work of this type than is the gynecologist. It cannot be denied, however, that many surgeons are splendidly qualified as gynecologists and that some gynecologists perform capable general surgery. The size of the hospital and the type of its clientele must in a measure determine the advisability of this type of staff specialization.

The chief of staff of the obstetric and gynecologic division should be a man of strong personality and good administrative sense and should be capable of handling details. It should be to this physician that the medical head of the hospital looks for recommendations governing the organization and functioning of this department. The chief of staff should make himself responsible for the conduct of monthly conferences and in a large measure for the general quality of the work of his colleagues. If possible the obstetric staff should serve throughout the full year.

A resident in obstetrics is capable of furnishing much useful supervisory service to the intern. On the other hand, unless the hospital is able to reimburse the resident in obstetrics for his work, the visiting staff must exert itself to make his stay in the maternity department clinically worth while. The length of the maternity assignment of the intern may vary from three months in the institution with a rotating service to a full year in the specialty hospital. If no resident is available the service of the intern should be arranged on a senior-junior plan so that at no time will the department be staffed wholly by interns without experience. The intern should be permitted to perform normal deliveries only, and even then his activity should be supervised by a resident or by an assistant visiting obstetrician.

It is of the utmost importance that a carefully prepared technique book be found in every hospital. This cannot be too highly detailed. To be sure, it is impossible to standardize the practices of each member of the obstetric staff. Minor variations will surely exist but it should be practicable to set down a major technique covering both predelivery and postdelivery procedures. This book should be carefully kept up to date and each new intern should be required to sign it.

The educational activities of the maternity department are of the utmost importance.

Classes of instruction for nurses and interns should be conducted by members of the visiting staff. Standing orders should be discussed and frequently reviewed and revised. Even such a matter as the methods employed in the care of the newborn presents the greatest of variations. A few years ago, *The Modern Hospital* conducted a study of the care of nursery patients. Almost as many techniques were found to exist as were the number of the hospitals interrogated. Some employed soap and water, some powder, some oil, some all three of these, and some used only antiseptic applications. While all of these techniques, no doubt, possess their virtues, there surely must be a generally correct method which would possess the greatest advantages and the fewest defects.

The nursing in the maternity department must be highly specialized. The nurse in charge should be unusually well trained, tactful, capable, and able to direct the work of her subordinates effectively. A graduate nurse in charge of the nursery, another for the delivery room, and possibly a third as general floor supervisor should make up the supervisory staff. This group must be duplicated for night work and increased as the size of the department requires.

An attempt has been made to set down the nurse-to-patient ratio. In some institutions it is believed that four students are capable of performing the work of three graduates, that there should be no greater ratio than one nurse to five maternity patients during the day and one to ten during the night, and that the nurse-to-baby ratio should never be less than one to five. Of course the type of hospital and the capabilities of the nurse may alter these ratios considerably. The members and type of the personnel necessary in the delivery room are also of much importance. It is believed by many that one supervisor, one general service, and one clean nurse should comprise this team.

Careful supervision of the health of maternity nurses should be maintained. It is, of course, incorrect for nurses with tonsillitis or any type of infection of the hands or arms or any other transmissible condition to care for obstetric patients. In some hospitals where almost perfect aseptic technique has been worked out for resident physicians and nurses, it is incongruous to observe members of the visiting staff making rounds ungowned and with little attention to hand washing. Indeed, it appears that the members of the visiting staff represent a difficult group from whom to require careful attention to aseptic technique.

No obstetric department is complete without carefully conducted prenatal and postnatal clinics. Here the most effective preventive medicine principles should be followed. The period of pregnancy is certainly not, as considered by some, a wholly natural and safe time. True it is that many women do not consult the physician until the first stage of labor begins. It is also a fact that our pioneer forefathers, besides being hunters and tillers of the soil, also became accoucheurs when their wives fell into labor. Nevertheless, the prenatal clinic should be carefully organized. It is probably best that a member of the major obstetric staff should act as its head. It is also desirable for the maternity nurse to supervise this portion of the work.

Here again should be prepared a manual for the conduct of this out-patient activity. Such a procedure book should set down the method and frequency of examinations of pa-

tients, the type of history to be compiled, a careful recording of pelvic measurements, as well as such danger signs as headache, hypertension, dizziness, edema, blurred vision, vomiting, and bleeding.

In the prenatal clinic a splendid opportunity is to be found to make use of the services of the dietitian, who should hold regular classes of instruction for this group. Here the type of food proper for the pregnant woman may be carefully explained. The occupational therapy department too may be utilized to assist in the preparation of the layette, and the services of the dentist and of the x-ray department certainly should be sought. A class in the care of the baby should be offered to expectant mothers.

When the time for delivery approaches, the technique of admission of the patient to the hospital is of importance. Prenatal records should be promptly available and it is, of course, most inefficient and unsafe for a patient to be taken to the delivery room without the measurement of the pelvis and the medical history of the pregnancy being at hand for the guidance of the physician supervising the delivery.

The postnatal clinic is also of the greatest importance. Here should be supervised the life of the patient for from six to twelve weeks following her discharge from the hospital. Finally, the examination upon discharge of these patients should be most complete. Orders for diet and douches and special treatment to be given at home should be explicitly set down. It is probably wise for each patient to visit either a clinic or the physician's office for three months after delivery.

3. Adequate Care of the Obstetrical Patient in the General Hospital from the Standpoint of the Nursing Care, *by Clara M. Konrad**

WITH the progress in science and the changing attitude of the American woman, who has insisted that the profession ease the pains of childbirth, shorten the duration of labor, and at the same time help her to deliver a living baby, the leaders in the medical profession have come to a profound realization that the practice of obstetrics must become a special field of medicine. This means that the obstetrician must possess a working knowledge of medicine, pediatrics, surgery, communicable disease, in addition to the essential knowledge of the basic medical sciences, together with a comprehensive training in the field of obstetrics. Logically, then, a nurse, in order to be capable and successful in this specialty, must be able to render a nursing service from whatever aspect of management the obstetrician decides to treat the patient. Instead of obstetric nursing being a single specialty, the nurse must possess a working knowledge of the entire field of nursing. It is indeed the branch of nursing that calls for the most skillful, competent, and intelligent type of woman. All these qualifications must be present in one person, the obstetrical nurse.

It is acknowledged that in the general hospital the obstetrical department is commonly considered "just another department" of the hospital. It is not singled out as a separate

* Adapted from *Hospitals* 10:28-30, Nov. 1936.

entity but, rather, it is one of the several departments, with a reciprocal interchange of supplies, linens, and personnel when necessary. A nurse, when occasion demands, is sent from some other department of the hospital to the obstetrical division to relieve; and very often the fact that she has been assigned to the care of a patient with an infectious disease is overlooked because of the urgent need for relief in the obstetrical division. She rushes away from her duties in the medical or surgical department, and without change of uniform, and often without a gown, takes up the duties where the other nurse, who has been called into the delivery room to scrub for a case, has left off. Later, when the rush is over, she returns to her former station. Such a departure not only offers danger to the patients being served at that particular time, but invites carelessness and scorn for caution on the part of the nurses regularly assigned to the obstetrical division. Thus such thoughtlessness, for it must only be thoughtlessness in the light of our present-day knowledge, tends not only to put the practice of obstetrics on a lower level, but is contrary to adequate care of the patient. This abuse of privilege and breach of trust must not be allowed to continue if the lying-in woman is to receive the protection and insurance of safety to which she is justly entitled.

The supervisor in the general hospital is responsible for the proper functioning of the obstetrical division. Her duties include the supervision of the labor rooms, if there are any, the delivery rooms, and the nursery. In addition she audits the doctors' lectures, teaches obstetric nursing to the students, supervises the students on the floor and in the nursery, is present and usually circulates in the delivery room, marks the newborn baby for identification, admits it to the nursery, then hurriedly attends to such administrative duties as are imperative even in the busiest times—reports for the nursing school office, statistical reports, doctors' orders, charts, supplies, diet slips, assignment for students, and so on *ad infinitum*. She is truly compelled by circumstances and such a multiplicity of duties to be a jack of all trades and becomes, by virtue of those very circumstances, usually a master of none.

Thus it follows that obstetric supervisors are asked to do the impossible for want of sufficient moral and physical support in their efforts. It is difficult for other departments to understand the many circumstances that are peculiar to an obstetrical service, and therefore they do not appreciate the need of a full staff, for the want of which the efforts of those in the department must be without effect. Here, again, it is the patient that is handicapped.

In addition to all these duties, the supervisor has a real problem in the student nurse who comes to the obstetrical division, sometimes without operating-room training, sometimes six months after theory in obstetrics has been completed. This is because the maternity division of a general hospital can absorb only a limited number of a class at one assignment. The nurse is unable to transfer theory to practice, and she becomes in this way a liability and a grave responsibility to the already overworked supervisor. Student nurses should have this theoretical instruction while they are on the maternity division, even if it entails the repetition of the same classes each month, and they will then be more intelligently pre-

pared to serve their patients. To make this possible the supervisor should have enough assistants to carry the load of administrative duties, thereby affording her the necessary time to teach and supervise this specialty.

Nurses coming from another department of a general hospital should be given a day off, have noses and throats cultured, and should be inspected for rashes and localized infections before reporting for duty in the maternity division. The use of caps and masks on the service as bacterial barriers may be debatable; however, the value of making those on the floor "obstetrical conscious" is most worth while.

As odious, and sometimes painful, as comparisons are, they do help us paint a picture, and it is in this light I wish especially to call to your attention how a hospital, entirely obstetrical, differs from the obstetrical department in a general hospital.

The maternity hospital is one large obstetrical division. Here we have very few patients suffering from diseases of bacterial origin; those who develop puerperal infection are isolated in a division completely separated from the rest of the hospital. Nurseries, floors, labor rooms, delivery rooms, operating rooms, isolation, clinic, and field departments are maintained with separate staffs. All that science has at its command either in technique or equipment pertaining to the care and safety of the mother and her baby will usually be found in such a specialty hospital—at least there is a far greater probability of finding it here than in a general hospital.

The Margaret Hague Maternity Hospital is a true example of a specialty hospital. It is an independent county institution, with Doctor Samuel A. Cosgrove as the medical director and superintendent. The bed capacity is 275 adults, and the daily average census is 190 adults and 175 babies, with approximately five thousand deliveries annually. Seventy per cent of the patients are classed as free or partly free.

The field department consists of hospital clinics, mothers' classes, and field service, with a monthly attendance in the various clinics of about 3000 adults. The field service is responsible for supervision and home nursing visits. Each of our patients, except emergencies, receives a prenatal and a postnatal visit either from our own nursing service or from an outside agency. The number of subsequent visits depends upon the patient and the conditions found. The mothers' classes are conducted in a series followed by a quiz with prizes and certificate awarded for attendance, as recommended by the Maternity Center Association of New York City.

Much time and thought were given to the organization of our nursing service. The nursing care of the patient was not overlooked either in the construction or in the equipping of the building. The nursing techniques were written for the obstetrical nurse; their aims are to provide the maximum safety to the patient, as well as economy of time, effort, and materials. The psychological problems, including the comfort and happiness of the patient, were considered.

The foregoing gives the nurse an intelligent interest not only in what she is doing but why she is doing it. All the techniques of nursing care were incorporated into a procedure book, which tells the object of a procedure, the materials used in carrying it out, and how

it is carried out. They have been in constant use, with progressive changes, for a period of five years. They have stood the scrutiny of trained eyes. They have been simple enough to prevent the individual nurse from misinterpreting, tearing down, or eliminating any part of them. They have been the means by which we have cared for 28,072 adults and 24,451 babies.

Hospitals, both general and special, feel that the bugbear in nurseries is infection, and that "Enemy Number One" is impetigo. We feel that impetigo can be controlled, if not entirely eliminated, by a rigid nursery technique, carried out by a well-trained and carefully supervised nursing personnel with the full cooperation of the attending and intern staffs.

For the year 1935, our nursery census was 5283, with sixteen cases of impetigo, which we feel is a very low incidence. Our observation nurseries play an important part in this control. The nursery nurses are constantly looking for rashes, discharging eyes, thrush, or other evidence of infection. As soon as any such condition is detected the baby is immediately transferred to the observation nursery. This transfer is made routinely. The baby must remain in this observation nursery until the laboratory either confirms or denies the suspicion. The pediatrician then decides whether the baby is to return to its original nursery or be sent to the septic nursery.

Experience has taught us the real value of education in the field of obstetrics, not only for the student but also for the entire nursing staff and the subsidiary workers. Our staff educational program consists of group conferences, classes, monthly staff conferences, and presentation of all new nursing procedures when they are being instituted. The supervisor and her two assistants are responsible for their entire department, the nursing care of the patient, and supervision of the carrying out of the doctors' orders. In addition, the supervisor is classified as a teacher, and her part in our educational program is the responsibility of helping the student correlate theory with the practice of the nursing arts. We are constantly fostering in her an appreciation for, and the utilization of, opportunistic teaching. She also trains and supervises subsidiary workers assigned to her department.

Our nursing school is conducted for the graduate and the undergraduate student. Observation and experience have taught us the wisdom of separating these groups. With few exceptions the graduate student has had sufficient basic training to receive the advanced phases rather than the fundamentals of obstetric nursing.

Our graduate students come from all parts of the country, at all ages, and from hospitals large and small; consequently their basic preparation varies. The recent graduates register with us because they realize the value of additional training in a chosen field. The demands of the obstetrical staff, as well as the recommendations or requirements by the departments of nursing that the obstetrical division in the general hospital be supervised by a nurse who has had a postgraduate course, often bring us the earlier graduate. In many instances she comes to us after she has had charge of an obstetrical division for many years. Then she becomes a real challenge to us in our education program. By enriching our curriculum to meet these needs we feel that the nurse ought to be able to return to a general

hospital with a good working knowledge and appreciation of the science of obstetrics and obstetric nursing.

Our director, who is fundamentally an educator, has always been ready and willing to give his time and guidance to our nursing department and to its educational program, and it is largely through his efforts and cooperation that our progress in obstetric nursing education has been made possible.

In conclusion, I would say that to adequately care for the obstetrical patient in the general hospital, the requirements as set forth by the American College of Surgeons in its report on hospital standardization must be met by all hospitals. But to meet these requirements is not enough. All who enter the general hospital, the medical staff, nursing personnel, hospital workers, and the general public, must be educated to a degree where they will appreciate the necessity for the rigid rules regulating the obstetrical department, and it is only when the general hospitals meet these requirements, and the hospital personnel enforces them, that the obstetrical patient will enjoy adequate care.

4. Anesthesia and Analgesia in Obstetrics in the General Hospital, *by Edward Lyman Cornell, M.D.**

IN many general hospitals the obstetrical department is given second or third place in the assignment of space, convenience of operation, and equipment. This condition has always existed because the hospitals have never had an obstetrician as head of the department. Seldom is the obstetrician consulted by the architect when the obstetrical department is planned. It follows that the anesthetic and analgesic service for obstetrics lags far behind that service in the surgical department. Surgeons are more numerous and bring in a greater number of cases which cost the hospital much less to care for; therefore, the obstetrical patient is given the poorer service. As a matter of fact the reverse should be true since there is no greater open wound left by any operator than that left by nature following a delivery. The same services should be provided for all classes of patients.

Only when there is an obstetrician with foresight, ability to get things accomplished, and a personality which commands respect does the obstetrical department in the general hospital become worthy of the name. It then commands the support of the community and the medical profession practicing in that hospital.

Women are now demanding relief from the pains of labor and the medical profession must accede to that demand. It behooves the hospitals to provide adequate facilities for that service. It has been the experience of the author that most hospital superintendents are reluctant to do anything which will add to the expense of operation unless competition of some other hospital in the vicinity forces their hand.

Since patients under any form of analgesia, be it morphine or the barbiturates, require constant watching by a nurse and a physician, some provision must be made for this service. There are two ways of doing this.

* Adapted from *Hospitals* 10:26-28, Nov. 1936.

One way is for the hospital to furnish a nurse to be with the patient throughout the labor period. The obstetrical department should have an intern assigned to that duty alone. These two should give their undivided attention to the care of the patient during labor. This service gives a much needed training to the floor nurses. Many nurses and interns have finished training without having seen a woman throughout the trying period of labor. Such a thing should not be allowed in an efficient general hospital of today.

Various contrivances have been used to control a restless patient during analgesia which have met with more or less success. Most of the appliances have the principle of confining the patient by placing boards at the sides of the bed with the idea of preventing her from falling out. No contrivance has been invented which keeps the patient from climbing over the boards unless a strap is used to fasten the legs or arms. Restlessness prevents their use, as before long the arms and legs become irritated often to the point of laceration. Furthermore, the restraint makes the patient more restless and harder to control. Unless the patient is under constant observation she is likely to be found wandering in the corridors or attempting to leave the hospital via the window. One patient to my knowledge was caught going home via the fire escape. This hospital narrowly escaped a lawsuit. It is needless to say that all patients are carefully watched in this hospital now! The supervisor and the hospital superintendent had been warned by me, but they saw fit to ignore the warning because of the expense attached to watching the patient who could not afford special nursing care. All patients, whether charity, part pay, or affluent, should be accorded this service.

The other method is to insist that all patients who are given analgesia in any form have a special nurse whose duty it is to remain with the patient constantly. These special nurses should be trained for this service. The following instructions should be given to the nurse:

1. The patient must never be left alone from the time the analgesia is begun until she is thoroughly awake after delivery.
2. The patient should be handled as little as possible since restraint or "fighting" the patient increases her restlessness.
3. Nutrition and fluids should be given the patient at regular intervals, preferably by mouth and, in extreme cases, by hypodermoclysis. If the patient refuses to take solid food, glucose or Karo syrup should be incorporated in the fluid given.
4. When the nurse wishes relief for any reason, one of the floor nurses should be assigned to relieve her temporarily.
5. Special nurses should not be assigned for a longer period than ten hours.
6. There should be a telephone or a call bell in the labor room so that the nurse may get immediate attention. The floor service should be drilled to answer promptly. It is better to have both telephone and call signal for emergencies.

A well-trained analgesic nurse has much less trouble handling patients than does the occasional nurse. It is very essential that the analgesic patient should not be resisted in her general movements. Rather she should be guided. If this is followed out, the restlessness of the patient is reduced.

I must caution you that the same difficulties occur *after* the patient is delivered as are

likely to happen before she is delivered; therefore, it is essential that these patients be given careful supervision until they are *thoroughly awake*. The nurse must be cautioned not to leave the patient under any circumstances until she is awake. I have seen patients disoriented as long as twenty-four hours after delivery, and, while they are able to carry on a sensible conversation, they are still erratic.

After delivery, many analgesic patients develop the "shivers." A few actually have chills which occur without a temperature. This condition is seen principally in patients who have been inadequately fed during labor. Glucose given by mouth, rectum, or hypodermoclysis will stop the shaking promptly.

On many occasions I have experienced difficulty in securing an anesthetist for a delivery. I am sure most of you have been much distressed to find the obstetric patient crying with pain while being set up for delivery, because no anesthetist was available. While it is true that this situation is seen usually during the morning or early afternoon hours when the surgical division is functioning, I still maintain that the obstetrical patient is entitled to the same courtesy and services as the emergency accident case which needs the services of a surgeon and an anesthetist. I am sure the surgeon attempting to work without an anesthetic would use such epithets and arguments that the hospital superintendent would hesitate to have a recurrence of the scene. Yet when the same situation arises in the obstetric department similar epithets and arguments are of no avail. Perhaps the obstetrician should take lessons from the surgeon and forget the time honored "watchful waiting."

A hospital with a large surgical service and an active obstetrical service should employ at least two full-time anesthetists, including one who could be called at any time. It is difficult to specify the number of surgical or obstetrical cases which an anesthetist is capable of handling a day or a month. Generally speaking, a hospital with a minimum average of five major and three minor surgical cases a day and 25 to 30 obstetrical cases a month should employ two full-time anesthetists. When the obstetrical service reaches an average of 60 patients per month, the obstetrical department should and must have a full-time anesthetist.

It is poor obstetrical technique to permit the surgical personnel and equipment to be used in the obstetrical department. Too often does the anesthetist come from a frank pus case to a clean obstetrical patient. Often no opportunity is given the anesthetist to take a bath or even change clothing. It is also essential that the obstetrical department have an anesthetic machine to be used exclusively in clean cases. The anesthetist should prepare his hands in the same manner as the surgeon before giving any anesthetic. The hair should be covered and a mask should be worn, and, of course, the anesthetic mask should be thoroughly cleaned.

Blood pressure readings and the pulse rate should be taken at frequent intervals throughout the period of giving the anesthetic. Too frequently is this neglected to the regret of the obstetrician.

Whether the hospital should employ a physician or nurse as a full-time anesthetist is a

debatable question. The salaries paid by the average hospital for this service are not attractive enough for a physician to make a life-time career. Observation tells me that the nurse anesthetist is satisfied, so that she is willing to devote her life to the work. I have worked with women physician anesthetists and nurses. I am impressed with the fact that the physician is able to render more efficient services.

In summarizing, I would like to stress the following points:

1. The anesthetic and analgesic personnel in obstetrics should be specially trained. This will prevent unnecessary accidents during labor.
2. The equipment and operating rooms should be separate and distinct from the surgical division.
3. Obstetrical patients are deserving of and should have the same analgesic and anesthetic facilities as the surgical patient.

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CHAPTER X. X-RAY SERVICE

1. The Hospital X-ray Department, *by Joseph C. Doane, M.D.**

MORE than a quarter of a century ago the use of the x-ray was in its infancy. For a number of years the employment of the x-ray was confined largely to the study of diseases of and the results of trauma to the bony structures of the body. Until some opaque and physiologically inert substance was discovered by which functional as well as anatomic diseases could be studied, the uses of the x-ray were rather restricted. Today most hospitals possess in some degree x-ray facilities for the diagnosis and, in many instances, for the treatment of disease.

In the large hospitals with ample means it has not been difficult to develop ample x-ray facilities. In the great majority of small hospitals, departments adequate for the diagnosis of fractures and even for the performance of certain grades of fluoroscopy are usually found. On the other hand, even with the refinement of this apparatus and with a substantial reduction in price, the result of competition as well as of the development of greater knowledge concerning production methods, it is still impossible for some institutions to obtain sufficient funds with which to purchase efficient roentgen-ray equipment.

It is difficult indeed to answer the question as to the size and type of hospital in which x-ray facilities are indispensable. It may be said, however, that wherever an attempt is being made to treat sick men and women in a modern way, access to x-ray facilities is usually necessary. What is to be done, therefore, in the small hospital when sufficient funds are not available either for the purchase of the apparatus or for the recompense of trained personnel? Under these circumstances, it is possible that some system of group responsibility for providing such equipment could be worked out. Yet no arrangement can be satisfactory in which delay must be encountered when an x-ray study is required. This is true because the physician or surgeon so frequently demands this specialty information immediately. Hence, sufficient time is rarely given either to call for aid from without the hospital or to enable any extra-mural apparatus to be of effective service. It may be said, however, that since an efficient portable or bedside unit can be bought for approximately \$1000, no institution need be without such equipment entirely. It must be granted, therefore, that an x-ray department, no matter how rudimentary, can be considered something in the nature of an absolute requisite in the equipment of the hospital.

It is interesting to note the diversity of locations that have been selected by hospital directors as suitable for the housing of this important division. In many hospitals, it has been felt wise to place the roentgen-ray department in quarters adjacent to the operating suite. This, it appears, is a logical situation because of the necessity for the frequent location of foreign bodies as well as for the treatment of fractures under the fluoroscope. If this be the

* Adapted from How to make the x-ray department a financial success, *Mod. Hosp.* 33:94-99, Dec. 1929.

place selected, some arrangement should be made by which it is possible to avoid the confusion and crowding on an operating floor incident to the study of patients from the wards and rooms of the hospital as well as those sent from the dispensary. In some hospitals, this requirement has been met by placing this department on the ground or first floor with easy access to the operating suite by elevator and to the rest of the hospital by corridor.

Ample waiting room space should be provided and, as is frequently the custom, hallways adjacent to this department should not be looked upon as the proper place for stretcher and ambulatory patients to congregate while awaiting their turn to be studied.

It is regrettable that in so many instances there has been chosen for this important activity a location whose only virtue seems to be that it was little used for any other purpose. As a result, the x-ray director and his co-laborers often work under insanitary and, at times, even dangerous conditions. Ample room should be provided for the prosecution of this work, with at least the same provisions for light and ventilation that one expects to find in a workroom in the industries. It is regrettable but true that the hospital, standing as it should for the best in personal hygiene and preventive medicine measures, frequently requires its workers to labor in surroundings that would not be permitted in the most carelessly conducted factory or shop.

In locating the x-ray department, it should also be remembered that a certain fire hazard always exists in this work. The x-ray department certainly should not communicate with floors above by means of elevator or pipe shafts. And this is said with a complete knowledge of the safety factors vouchsafed by the use of the cellulose-acetate films. No matter how much confidence one rightfully places in the use of nonexplosive films, the storage of large quantities of these records in a building occupied by patients, or even adjacent to such a building, is ill-advised. Moreover, the accidental admixture of acetate and nitrate films has been known to take place. Experienced hospital administrators for years have been preaching against the use of combustible or explosive films. If any considerable quantity of exposed or nonexposed films must be stored, a concrete vault, perhaps with a loosely attached roof and built at some distance from the main hospital plant, seems to meet all safety demands.

The equipment of the x-ray department will depend largely upon the type and volume of work expected of it. The most meager equipment in the smallest and most impecunious hospital will certainly provide the essential roentgenographic needs and, possibly, will provide for the performance of some fluoroscopic studies. The routine in all well-run departments consists not only in the exposure and development of films, but also in confirming and elaborating these findings by the direct inspection by means of the fluoroscope of the organs and tissues being studied. Frequently, in the small hospital, the same transformer is used for fluoroscopy as for roentgenography. A properly constructed overhead wire system makes it possible so to manipulate the electric terminals that these two procedures can be carried out from the same machine.

There have been great refinements in the manufacture of the x-ray tables in the past decade. As a result, radiography can be performed in one of several positions with hardly

any inconvenience to the patient. Fluoroscopy can usually be done by the use of the same table. In a small hospital, a room perhaps 14 by 16 feet should be sufficient for the proper housing of this equipment. To be sure, the most meager requirements should provide for a control stand so enclosed that protection to the health of the operator is continuously provided.

Whenever fluoroscopy is to be done, a toilet and a dressing room adjacent to the machine room are convenient. In larger hospitals, a separate room frequently is assigned to each type of x-ray activity and often a separate transformer is provided. In some institutions, the construction of the dark room seems to have been an afterthought. Its entrance often is not safeguarded against light and the room itself is frequently so small that the technician is handicapped in her work. A properly constructed shutter which will allow ventilation without light is of the utmost importance. Sometimes this consists of an opaque material, such as one sees in well-made window curtains, so arranged that it slides from a roller through lateral slots, thus allowing for the elevation of the window sash and for the elimination of light. This latter arrangement is simple, inexpensive, and fairly efficient.

In the small hospital, if stereoscopic work is to be performed, it is of course necessary to provide a film changer and usually a Bucky diaphragm. It appears rather difficult for proper dental work to be performed by the use of an ordinary x-ray table.

Some institutions have been greatly concerned about the advisability of purchasing a deep therapy machine. Such a machine, costing usually from \$5000 to \$6000, represents a colossal investment for many institutions. If the institution has a capacity of 200 beds or more, if it conducts an active surgical service in which there is considerable likelihood that malignancies will be frequently encountered, and if there are in the community no other machines of this type to which such patients could be referred, it seems advisable for this major investment to be favorably considered. Here is a splendid opportunity for cooperative effort on the part of the hospitals in any town or city. A cancer service might well be instituted on the basis of a community need and the treatment of malignancies, preoperative or postoperative, could be carried out by one institution while the remainder of the group contributed toward its purchase or at least toward its maintenance. It would seem inadvisable for more than one institution in a community, although it might represent many thousands of inhabitants, to purchase such equipment. Moreover, it seems to be a development of the last quarter century to look more and more upon the care of the sick as a community problem, and to consider as ill-advised the unnecessary duplication of specialty equipment and personnel by a number of hospitals. The days of competition in hospital work are fast drawing to a close.

One of the most difficult problems that confronts the hospital executive is to determine the best method by which the x-ray department should be administered. A study of hospitals throughout the country reveals a great diversity of systems of administration. As is often seen in the other specialty departments of the hospital, there does not appear to be sufficient work therein to require the full-time service of a skilled roentgenographer. In many small hospitals and in not a few larger ones, attempts have been made to solve this

problem by engaging a part-time director. In some communities where there is a paucity of well-trained x-ray physicians, a curious situation has arisen by which one x-ray specialist may serve more or less satisfactorily as director of the departments of at least a half dozen hospitals. In a certain eastern city, this situation was actually found to exist.

It does not seem reasonable to suppose that a physician, conducting a private office of his own for the study and treatment of disease by x-ray, could find sufficient time or energy in the course of the day to spend an adequate number of hours within a half dozen institutions. But a mere time requisite is but a part of the problem. In addition, the director must furnish both the technical skill and the scientific stimulus that should be expected from a department as specialized as is this one. When such a situation exists, it is usually found that the smaller and less opulent hospitals have been glad to attach the name of a well-known roentgenologist to their staffs and yet have not been able to supply a sufficient honorarium to command much of the director's time. As a result, the hospital does not receive a great deal of benefit from this arrangement.

What, then, are the possibilities of providing a system that promises prompt service from the x-ray department when the director of the department may be engaged at that time at any one of several other hospitals, or may even be concerned with his own private practice? The number of hours of a director's time a hospital requires must be wholly dependent upon the size of the hospital and the type of work it carries on. In addition, the number of members of the resident personnel, as well as their degree of skill, will determine in a large measure the amount of service required from a visiting and nonresident director.

There is another angle to this problem that is highly practical. When an x-ray specialist is conducting within the community a private office for the prosecution of his specialty, he is, in reality, placing himself in competition with the institution from which he receives an honorarium, small though it may be. This difficulty frequently is enhanced by the fact that the rate card issued by the hospital is often slightly higher than the prices charged by the director himself in his own office. Hence, it is perfectly natural for referring physicians, having learned of this state of affairs, to send their patients for study to the director's private office rather than to the hospital.

When this pernicious system is further developed, the director sometimes receives a certain percentage of the gross or net income resulting from the activities of the department, in return for which he is expected to give his services, to furnish certain supplies including x-ray films, and at times to pay the salary of a technician. It can be readily seen, under such circumstances, that the free work requested by staff members immediately becomes a financial liability to the director, and that it is to his advantage economically to keep within the lowest possible bounds the number of films used on ward patients.

In some instances, a special arrangement exists between the hospital and such a director by which the institution pays the cost price for every ward patient studied or treated by the x-ray. Usually the hospital is expected to furnish, under this arrangement, the x-ray apparatus, heat, light, and janitorial service, and to keep the department, including its equipment, in repair.

In some hospitals, particularly those of a hundred beds or less, in which a roentgenologist is found whose time is largely consumed by other hospital and personal appointments, the absurd plan has developed whereby the x-ray director spends no time at all at the hospital. True it is that in certain situations the director possesses a staff of one or more assistants whom he dispatches to the hospital when he is told that an x-ray study is required. Any system is inefficient that depends upon each needed study being made an emergency that demands a telephone call for help from outside the hospital. So important is the use of the x-ray in modern hospitals that such studies should be routinely possible at any hour of the day or night. The presence of a resident officer who possesses sufficient ability only to expose the film and who must dispatch it to a distant director's office for development and report by telephone represents, as has been remarked, an absurdity in procedure. Yet this arrangement is observed in various guises in many of the hospitals in the field.

This leads to a more concrete discussion of methods by which the director should be paid. There are two main systems in vogue: The first, and without question the most advantageous to the hospital, is the payment of a flat salary to the director, which commands a sufficient number of hours of his time so that the x-ray department is able to contribute its full share to the work of each hospital day. The amount of such a salary depends, of course, upon the skill of the roentgenologist, the number of hours required, and the size of the hospital. Such a salary may vary from \$3000 for four hours of service a day to \$10,000 or \$15,000 a year for full-time service. Fortunate indeed is the hospital whose size and finances permit the employment of a full-time director at a living salary. Here the problems arising from a real or potential competition between the director and the hospital are obviated.

Some hospitals compute the payment of the x-ray director upon a net income basis, this ratio usually representing an equal division of these monies between the director and the hospital. Again, there are institutions that allow the roentgenologist to collect 50 per cent for all private fees, while fees from clinic and ward patients are appropriated by the hospital. And finally, there are institutions that collect all the fees for the roentgenologist, retaining 10 per cent of these fees for this service.

It will be quickly seen that no standard practices have been adopted representing the most logical and businesslike arrangement between the head of this department and the institution he serves. It seems that the hospital should refrain from adopting any plan that contemplates the development of films outside the institution. No hospital that permits any member of its personnel to function *in absentia* can furnish a full and scientific service to a community. The stimulus that arises from the consultation of other staff physicians with the x-ray director and from their discussions of their clinical problems in the light of the x-ray findings is most desirable.

It has been intimated that a flat salary basis appears to be the most logical, although in certain instances it appears that a percentage basis serves as a stimulus to enlarge and increase the scope and activity of the department's work. The hospital should certainly furnish all supplies as well as the salary of the x-ray technician. An increase in free work

should not represent a financial liability to the director. If this type of arrangement is adopted, a percentage of the net income of the department might be a fair basis upon which to proceed. It ought to be understood, however, that if a major expenditure for repairs or replacements becomes necessary and the director is not at fault, the hospital should meet such an obligation. If 50 per cent of the net income is not adopted as a standard, a somewhat smaller fraction of the gross income might be used as a basis of computation.

It seems perfectly reasonable for the x-ray technician to be assigned to some other work in the hospital, provided her full-time services are not needed in this department. But in the hospital's resident personnel, there should be someone who possesses sufficient ability not only to expose but also to develop and read emergency films. This person may be a resident physician or a resident medical head of some other department.

It is not possible to lay down any rule relative to the comparative expense and income of such a department. In some large institutions, each x-ray exposure costs from eighty cents to a dollar. In smaller institutions, this unit cost may run much higher. In one hospital of 125 beds, the annual outlay for the x-ray personnel is about \$6000, while supplies, including films and chemicals, amount to approximately \$2500. There is another criterion by which the care in ordering x-ray studies can be more or less gauged. Where negative reports are too high in comparison to the number of studies made, one should infer that an insufficient and hurried clinical study has been made. The x-ray should be often confirmatory rather than wholly diagnostic.

Sufficient has been said to denote the importance of the x-ray department as a scientific asset of the hospital. Every aid should be given the director to enable him to formulate definite conclusions from his studies. Important points in the history of the patient should be included upon the x-ray request. The x-ray study of disease should not represent a kind of contest between clinicians and x-ray workers as to the demonstration of their relative diagnostic abilities. The diagnosis of disease is a cooperative venture. The clinician who looks to the x-ray department for a diagnosis on his patient is frequently deceived. Indeed, even with the refinement in x-ray technique that has come with this day and age, it still must often serve simply as an arrow to point out possibilities rather than to make diagnoses with certainty.

The x-ray department of the hospital, therefore, has much to contribute to the institution and its community. It should be the purpose of the board of trustees to bring this service within the reach of all economic classes, and any tendency toward exorbitancy in the fixing of rates should be avoided.

2. The Hospital and the Radiologist, *by Robin C. Buerki, M.D.**

DURING the past few years there has been considerable discussion as to the relationship that hospitals should maintain with radiologists. The main consideration must, of necessity, be the patient. Anything that is for his ultimate benefit must be our major aim.

* Adapted from *Mod. Hosp.* 46:68, Apr. 1936.

There are but 1500 men in the United States that can actually qualify as radiologists. These men are, in the main, in the East and in other centers of population. Statesmanship demands that we do not deal with sections, but that we view the problem of the country as a whole. Standards that may be applied to New York City and Chicago should not be imposed upon the entire country until there are men adequately trained to meet the needs of all the people without materially increasing costs of medical service or at least until the public is adequately educated to realize the value of the specialist.

It might be well at this time to review the conditions existing in ophthalmology. Despite the opposition of the ophthalmologists, most states have licensed by law a special group of practitioners, the optometrists, to do refractions. The number of ophthalmologists in the country is too small and their distribution is not sufficiently general geographically to make it possible for them to carry more than a fraction of the needed eye work. This should be a warning to radiologists that a similar condition may face them.

Every licensed physician has the legal right to carry on any form of diagnosis and treatment. He is likely to short-circuit roentgenologists if there is a professional or an economic reason for him to do so. This is not a matter which the radiologist or any hospital group can control. Any proposal which increases x-ray costs to the average patient will arouse the unthinking antagonism of the public. In the end this may easily become disadvantageous to roentgenologists and detrimental to the public.

Radiologists are asking that they be placed on the same professional basis as the surgeon, the internist, or any other specialist. If by this they mean that they do not want to be considered glorified technicians, I heartily agree with them. I do not believe that there is a thinking member of any hospital staff or an administrator in the country who is not willing to grant this professional recognition. I for one believe that the practice of medicine, in the special field of roentgenology, should be performed only by qualified physicians who have specialized in their field and that the relationship of the radiologist to his patients should be as nearly as possible the relationship that exists between the specialist in other fields and his patients. The radiologist should deal with the patient through the family physician. This will materially strengthen his consultant relationship. When the radiologist states that the only way he can gain this professional recognition is to place his services on an individual fee basis, I cannot agree with him. I have talked to radiologists from one coast to the other and when they are granted equal status with other specialists many of them feel that the method of remuneration can well be a basis of individual agreement.

We find that the prevailing practice among hospitals of the highest grade varies in different parts of the country and within the same city. We find salary, fee, and commission bases and combinations of these. I believe that I am in favor of the fee basis of remuneration for specialists rather than either of the other two methods, namely, salary or commission. However, in reviewing the principles of ethics of the American Medical Association, I find nothing opposed to remuneration in the form of salary, fees, or commission.

Certain it is that the specialist, be he surgeon, urologist, or roentgenologist, who steps into a position on a salary basis, finds his clientele waiting for him (a clientele which gives

him a virtual monopoly) and a remuneration that is certain. His is not the lot of many equally well-trained specialists who struggle to win for themselves that fair proportion of patients. The remuneration of the radiologist should be adequate and on the same level as specialists whether this remuneration be in the form of salary, fees, or commissions, and no substantial profits over and above the reasonable costs of maintaining the department should accrue to the hospital. The patient must not be exploited through excessive fees.

3. Principles of Relationship between Radiologists and Hospitals, *by the Council on Professional Practice of the American Hospital Association**

IN view of the current discussions concerning the relationship of radiologists to hospitals, and because of the desirability of protecting the public, of maintaining radiological services of high efficiency, of safeguarding the hospitals, the hospital radiologist, and the interests of the non-hospital radiologist, the following basic principles are hereby approved by the Board of Trustees of the American Hospital Association.

1. The radiological service of the hospital shall be maintained primarily for the benefit of the sick.

2. Every hospital radiological department should be under the direction of a competent radiologist, preferably a diplomate of the American Board of Radiology¹ or one who is working toward that objective. If, because of size or isolation, such arrangement be not feasible, some member of the general medical staff trained in radiology should be in charge and a consultation service arranged with a nearby radiologist.

3. The radiologist is entitled to recognition as a professional member of the medical staff and as head of a hospital department.

4. The preservation of the unity of the hospital and its component departments and activities is an essential administrative principle. This principle can be maintained without any infringement on professional rights or professional dignity.

5. Inasmuch as no one basis of financial arrangement between a hospital and its radiologist would seem to be applicable or suitable in all instances, that basis should be followed which would best meet the local situation. This may be on the basis of salary, commission, or privilege rental, but in no instance should either the hospital or the radiologist exploit the other or the patient.

6. When an arrangement is effected whereby the radiologist of the hospital pays a rental for space and service, cares for non-pay patients, and in return retains all private fees collected, such contract should clearly cover the matter of depreciation of equipment, replacements and additions, should protect the radiologist against excessive non-pay work, and should take into consideration the "good will" by virtue of which a large proportion of the paying clientele is attracted.

* Adapted from *Principles of Relationship between Hospital and Radiologists, Anesthetists, Pathologists*. Chicago, American Hospital Association, 1939.

¹ In Canada this would read "American Board of Radiology or an equivalent body."

These principles were approved by:

1. The Board of Trustees of the American Hospital Association;
2. The Radiological Inter-Society Committee (officially representing the American College of Radiology, the American Roentgen Ray Society, the Radiological Society of North America, and the American Radium Society);
3. The Council on Medical Education and Hospitals of the American Medical Association; and
4. The American College of Surgeons.

The American Hospital Association and the Radiological Inter-Society Committee view with disapproval the proposal that the actual cost of films and associated overhead be separated from the professional charges of the radiologist or that the responsibility for this department be divorced from the hospital. While in many instances this would be a financial relief to the hospitals, it would probably result in frequent omission of the radiological consultation with a specialist in radiology, would mean less efficient radiological service with potential legal complications, and would tend to create difficulties with national and other organizations requiring supervision of the radiological work by a competent radiologist.

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CHAPTER XI. OUT-PATIENT DEPARTMENT

I. Importance of the Out-Patient Department, *by C.-E. A. Winslow**

THE first significant and outstanding tendency of the last half century has been the gradual and steady movement of the hospital and all that it connotes from the field of philanthropy toward the field of public health. Slowly and gradually two fundamentally important changes of emphasis have crept into the picture and altered our whole conception of the hospital as a social agency. We have learned that a hospital is as essential for the rich as for the poor, that it is the only place in which serious disease of certain types can safely be cared for, that it is the cornerstone of medical practice for every class in the community. We may say of the hospital, as Davis and Warner have so well said of the dispensary, that it is a place for the treatment of all who need medical service and cannot secure equivalent medical service elsewhere.

So far as the dispensary is concerned, and in large measure so far as the hospital is concerned, another thing has happened which is equally significant. We have not only broadened our conception of the classes which organized medicine should serve; we have also broadened our conception of the kind of service which it should render. The development of out-patient services in the form of prenatal clinics, infant welfare conferences, school clinics, tuberculosis clinics, nutrition clinics, mental hygiene clinics, and health examination clinics has made it clear that the problems of the hospital group include prevention as well as cure. It is no longer the relief of acute suffering with which you are concerned. It is rather with the application of the highest resources of organized medicine to the prevention and the treatment of disease.

Meanwhile, as you have been moving away from the field of philanthropy toward that of preventive medicine, so the health officer has been moving from the field of sanitary law to the broader realm of modern public health; and the preventive medicine you begin to visualize and the public health we on our side begin to visualize prove to be largely identical fields of enterprise. Fifty years ago the health officer was a sanitary policeman. Step by step with the unfolding of the possibilities of the new public health, he has been expanding on exactly the same lines of activity that you as hospital executives have been led to approach from an opposite direction. He too has his prenatal clinics, his infant welfare stations, his school clinics, his tuberculosis clinics, his nutrition clinics, his mental hygiene clinics, his health examination clinics. In the field of out-patient service the hospital movement and the public health movement have met and interfused.

This meeting and interfusion are in my judgment wise and salutary. It is well that the sharp artificial line between the prevention and the treatment of disease should be broken down; for this is a distinction which often proves to be without a difference in the individual case. If a school child is found to be underweight and on inquiry it is found that he

* Adapted from *Tr. Am. Hosp. A.* 28:294-300, 1926.

is coming to school without breakfast, if then his dietary standards are improved under the instruction of the school nurse and he gains his normal weight, is it prevention or cure? Clearly it is cure of the state of malnutrition which had already become manifest and prevention of the further and more serious results which would otherwise have developed. So with the placing of an incipient case of tuberculosis in a sanatorium, so with our early operation for cancer, so with the surgical treatment of a wound. In every instance cure and prevention are blended although in varying proportion. We may well say with Newsholme that "the treatment and the prevention of disease cannot administratively be separated without injuring the possibilities of success of both."

The out-patient department is then, and should be, the common meeting ground of the hospital administrator and the health officer; but when two distinct groups of workers find themselves without intention or design in the joint occupation of a common field there is always the chance that a meeting place may prove a battleground rather than a nexus of cooperation. It is particularly desirable in such a case to give careful consideration to the fundamental principles involved to arrive at a sound theoretical conclusion as to objectives and responsibilities.

Let us assume for the purpose of our discussion that a city of 200,000 population is served by a general hospital with a pediatric ward and a general out-patient department, a separate maternity hospital, a county tuberculosis sanatorium, and a state hospital for mental disease. Each of these institutions is modern in its outlook and is growing and expanding along broad and constructive social lines. The general hospital operates one infant welfare station and has a strong social service department with nurses for home visiting of discharged cases. The maternity hospital has its own out-patient department and prenatal nurses to visit mothers in the home. The sanatorium maintains a clinic and a corps of nurses for tuberculosis work in the city, and the mental hospital has a city clinic and plans to develop systematic follow-up work in the home.

From the hospital angle all this is logical and reasonable. The patient who is going to enter a hospital, the patient who is in a hospital, and the patient who has just left a hospital are all one individual. It seems only right and proper that the problem of tuberculosis or mental disease should center about the appropriate hospital and that out-patient and home nursing service should radiate from the hospital into the individual home.

Let us now look at the problem from the angle of the progressive health officer of this same community. He has been moving on with the development of the best thought in his field from municipal sanitation and control of acute epidemic disease toward a broad and constructive program of community preventive service. He has communicable disease nurses and school nurses and child hygiene nurses in his department. He operates school clinics and infant welfare stations. He is impressed with the lack of correlation between his clinics and those attached to the hospitals. Above all, he realizes the duplication and waste involved in the entrance of half a dozen different types of specialized health nurses and health teachers into the same individual home. He has become convinced that the wisest and most effective type of home health service is that which utilizes a single district nurse

for each section of the community, performing a complete generalized service for every one of the 400 or so families assigned to her care. What shall be his policy toward the specialized hospital agencies at work in the health field and how can he bring his sound and just vision of the community problem into harmony with their view, which to them seems equally justified but which is at some point diametrically opposed to his?

We are of course dealing here with one of the most fundamental and most puzzling problems of organization which confronts the administrator and the businessman and the statesman in almost every field of human activity—the problem of functional *vs.* regional organization. Shall health service be organized about a function, such as the care of the child or the prevention of tuberculosis, or shall it be organized around a series of local or regional units? There is rarely any simple or easy answer to such a question. Both sides have their valid claims and in the given case we must compromise as best we may, with psychological and personal considerations as well as logical and abstract considerations in mind—with a view to the historic past as well as the desired future. Yet it is always, I think, of real value in such cases to keep in mind what may be considered an abstract ideal, toward which we may shape our course as circumstances may permit.

So far as the problem of community health is concerned, it has seemed to me that the key to a solution lies in the relationship of the dispensary to the hospital on the one hand and to the district and home health service on the other; and it is in this sense that I have called the dispensary a strategic point in the public health campaign.

In our hypothetical city of 200,000 population we may, I think, grant that there should be special hospitals, or at least special hospital services, dealing with internal medicine, with pediatrics, with obstetrics, with mental disease, with tuberculosis, and the like. On the other hand, if you follow closely the trend of thought and of experience among public health workers you will, I think, be convinced that generalized nursing service operating from district health centers is the sound plan of organization for carrying the gospel of healthy living into the individual home. Why cannot we recognize both principles and use the polyclinic as the connecting link between the two types of organization?

The polyclinic, from its very nature, knits up the threads of specialized hospital service into a single coordinated whole and of the advantages of such a correlation there can be no reasonable doubt. In our hypothetical city of 200,000 people there would be clear gain for all if the obstetrical clinic, the tuberculosis clinic, the mental clinic were all held in physical contiguity with the out-patient service of the general hospital—for only so can the most effective reference and consulting service, with the necessary laboratory facilities, be economically and effectively secured.

Beyond the nexus of the polyclinic, however, as we pass outward into the homes, may not the community health service be best organized on the generalized regional basis which has proved so satisfactory in the public health experience of the past decade? In our city of 200,000 the strands of influence from the polyclinic might extend outward through, first, major health units like the admirable White Fund Health Units of Boston with pre-natal and infant welfare clinics for the handling of normal cases, with contact clinics for

the detection but not the treatment of tuberculosis, with health examination clinics, with dental hygiene clinics, and the like. In more outlying regions would be minor health centers perhaps limited to local infant welfare and prenatal work; and finally in the homes there would be a single family health worker, the generalized public health nurse doing all kinds of health teaching and giving all kinds of visiting nursing care. The visiting nursing staff would of course have its specialist supervisors, in infant hygiene, in tuberculosis, in nutrition, in mental hygiene, to instruct the district nurses and to deal with the individual problems which require the attention of a specialist. At the major health centers and at the polyclinic there would be other specialists who might be called on for similar service; and the psychiatric social workers might well do the major part of their follow-up from the polyclinic as a center. The fundamental routine health services in the district and in the home can, however, in my judgment be best organized on the regional rather than the functional plan—the specialized interests of the hospital, emphasized in acute illness, interlocking at the threshold of the out-patient department with the generalized program of community health service.

I am of course ignoring the complicated local problems which arise as a result of diversity of management, of personal jealousies, of vested interests. Artemus Ward was a profound philosopher when he remarked that "There is a great deal of human nature in man." Yet if we can once visualize an abstract ideal of organization, as we would like to see it if we could, we have made the first step toward progress. The art of statesmanship in its essence consists in formulating an ideal and then so dealing with circumstances and with personalities that we approach that ideal instead of receding from it—even though our rate of progress may be infinitesimal. He who sees only ideals accomplishes little—he who sees only facts, even less. He who grasps both facts and ideals, who molds the actual to the form of a vision, is the man who helps to build a better world.

2. The Future Significance of Out-Patient Care in the Country's Hospital and Medical Program, by *Frederick J. MacCurdy, M.D.**

It is impossible to say what course or trend the future of hospital practice, or even the future of public health, will take. Without definite leads, one must predict with caution. Of one fact only are we certain—medical care of the public and responsibility to the public for medical care rest largely in the hands of the medical profession and the hospitals. It has been evident to all who are concerned with work in the health field that there is not the spirit of harmony and cooperation which should exist between these two groups. It is further evident that neither group nationally has constructive or forward-looking plans which would assure the public that there is a blending of interests such as would lend assurance that the two groups most concerned are working toward any ultimate solution of the medical care problem.

Let us frankly look at the picture of medical practice and its limitations as of today. At

* Adapted from *Tr. Am. Hosp. A.* 39:460-466, 1937.

present medical practice in the United States is based, to a very large degree, upon (a) the principle that there is free choice of physician; (b) that the personal contact between the patient and his physician is paramount; and (c) that the physician himself is adequately equipped to care honestly and faithfully for the patient and his medical needs and to give the individual the advantages of the best that medical science has to offer. Twenty-five or thirty years ago when the majority of the practitioners of medicine were general practitioners, and when the field of medical knowledge was limited to the scope and abilities of a single practicing physician, these principles were valid. There are none of us who would quarrel with free choice of physician or with the greatest latitude in personal relationship between physician and patient. It, however, goes without question that but a small percentage of physicians throughout the United States are today equipped competently to practice medicine if left entirely to their individual abilities and equipment.

How far then can the individual physician go? During the past twenty-five years, the practice of the individual physician has narrowed itself, particularly in our larger communities, to the practice of one or more of the limited fields of medical care, and it has become necessary that we have the benefit of the opinions of several physicians if a patient is to receive adequate diagnosis and treatment for any major ill, if he is to receive the care to which he is entitled. The patient, therefore, especially in the case of any serious ailment, is no longer an individual problem, but becomes the object of multiple or group effort in both diagnosis and care, though he remain under the guidance of his family physician.

The individual physician can only go as far as permitted by his individual equipment and the diagnostic facilities which he has been able to accumulate. In order accurately and adequately to practice medicine as an individual today each physician would have to own a small, well-equipped hospital unit of his own, and be what we might call, for lack of a better title, a general all-around specialist.

Physicians become practitioners of medicine not by any logical selection or upon their aptitude as individuals to acquire and practice the art of medical science. The choice of entering the medical profession rests with the individual. He is licensed by written examination at or near the time of his graduation from medical school. In some states a short internship is specified as part of the requirements. He has free choice of location for practice. In no state, however, is it necessary that a physician's practice of medicine be supervised by any state or local group either legally or voluntarily or his ability come into question except malpractice be charged. Even admission to his local medical societies is largely a routine procedure and there is no guarantee from this membership to practice medicine. There are no states that review his efforts, evaluate what he does, or show interest to the extent that postgraduate work, reading, study, and his effort to improve himself and keep abreast of his work are followed. The only exception to this non-check-up rule is that our hospitals do endeavor to appoint only approved and known-quality individuals to staff positions. There are no states where machinery is set up with the function of protecting the public against poor and indifferent practice or for interval re-evaluation of the individual.

The public, although having free choice of physician, has no real knowledge as to the

preparation and training of the physician. Confidence is therefore placed blindly in the physician because no provision is made by either the profession or other agency to assist John Citizen in making an intelligent choice. Cannot the more highly localized and organized groups, with the hospital as the medical center, help in the correction of the problem of better distribution and higher type medical practice? Must we not assure the patient, whether he be an ambulatory patient or a bed patient, of better medical care through organized effort to help in this, one of his chief problems?

The hospital in recent years has assumed a dual responsibility in that it cares for patients' needs whether they are ambulatory patients or bed patients. The care of bed patients, of course, extends to a very wide range of individuals whom the doctors wish to refer from their private practice, plus those who are directly the responsibility of the hospital and community. The latter, because of indigency, may be wholly cared for by the hospital and its staff, while they are bed patients and later ambulatory patients. The ambulatory group, for which the hospital has gradually taken over responsibility, consists entirely of that section of our population which is medically indigent or near indigent, and that has in consequence become the responsibility of either the taxpayer or the philanthropist. The number of individuals receiving care through philanthropy or voluntary contribution, both lay and medical, is much larger than that receiving tax-fund care.

What is the place and significance of the hospital in this community scheme? The hospital is one of those institutions which has been created in answer to a specific need of the community. It groups all of those facilities which are necessary for better diagnosis and care of the individual patient, and it renders available to the community services which would otherwise not exist in the major portion of our social units. It is, in reality and basically, the center of the group of endeavor to secure better medical care for those in its environs. It stands as an expression of the most modern and scientific endeavor to raise health standards to those served. It should stand also, if properly used, as an educational and research center for the health agencies of the community.

Whom and what should the hospital serve? Its doors should be open to the whole community. Medicine is but one phase of social care called for in properly organized society, and the demands upon its use will vary directly as our social order improves or retrogresses. Communal medical needs are being adequately met in but few communities today, because of too much individualism and too little thought as to coordination of effort. Illness knows no class distinction. While there is a large portion of the population able to meet the cost of medical care, a much larger section must meet it by spread of cost as insurance, or have it met for them by the community.

All medical care, as we know it, resolves itself into the preventive and curative phases. The medical service, which is organized to make and enforce rules and regulations governing our sanitation and other phases of daily life that have a bearing on the health of the individual and thereby serve to decrease the opportunity for spread of disease and to promote the supplying of ways and means of eliminating or stamping out of contagion and the means of its communication, deals directly with problems of health, not individual

illness. This service, usually a public health organization, should undoubtedly be under government control and should regulate and supervise general health measures, because it works closely with the legal machinery for the protection of the public. Why, however, should this group ever enter into medical practice?

The curative phases of medical care deal with that individual whose health has threatened to or has departed from the normal. Here the private physician or the hospital enters directly into the care of the individual through medical or other services. Private practice of medicine has its limitations, as mentioned above, and is not able unassisted to care for the illness of a larger portion of those who apply to the private office. Although it is difficult to get the medical profession to recognize it as such, there is a considerable hiatus today between adequate private care of the individual and intelligent use of our facilities provided for by the hospital or group care of the individual. This affects about 20 per cent to 40 per cent of our population. In an attempt to help this group, which is in the main medically indigent, two lines of endeavor open up: (1) the effort of the community through tax levy and voluntary or paid medical contribution of service by physicians; and (2) a voluntary effort on the part of the community and the physicians to care for their medically indigent and near indigent. This is usually done in clinic groups characterized as hospital out-patient services.

Last year about 10 per cent of our population registered for such care, and made about an average of 2.5 visits per patient to what we call out-patient service. This service will probably draw from 40 per cent of our urban and less of our rural population. Organized out-patient service thus rendered came from over 700 hospital out-patient departments—of which about three-quarters were voluntary institutions.

It must be noted that we have not defined an out-patient to the satisfaction of the statistical group or to the satisfaction of those in the hospital world dealing with ambulatory problems. Should not out-patient care include all of those to whom the hospital renders service, whether it be in the curative or diagnostic divisions, as long as no bed care is actually involved? This would be considering the ambulatory care in its larger aspects, and in terms of service more nearly expressing the volume of work which the hospital is doing for the public. All of the statistics bearing on the volume of ambulatory service rendered by hospitals are confused by the fact that there is no real definition of an out-patient, and we are therefore unable to state the volume of such work in the United States.

There is one point, however, upon which we have very obvious evidence. The philanthropic organizations in our various communities are rendering a service in addition to that already furnished by government agencies which would more than double the cost of such service if tax monies were provided to support it, or were it taken over by any public agency. Today the community concern, independent of the taxpayer's effort, is meeting this local problem in a way which keeps the interest local. The significance of this local interest should not be overlooked when one considers the future possibilities of the development of better medical care to the community. A proper locally supported endeavor with organized community effort, inspired by a philanthropic motive, works to the best inter-

ests of the community and leads to the cooperation which is necessary to the success of the movement. It also keeps to a minimum the feeling among the recipients of such benefaction within the community that such assistance is something which is their due and to which they are entitled, rather than something which they should receive with appreciation and without abuse.

In some of our larger cities, where the bulk of the out-patient service as well as the other hospital endeavors is jointly carried out, we find frequently that a combination of tax money contribution to supplement philanthropic effort proves of greatest service for the dollar expended. This is because the incentive of private management is directed to giving the lower unit costs of operation for equal service rendered. There is no doubt but what today group treatment of the medically indigent and near indigent has come to stay, whether it be under some form of taxation, social or community insurance, or a continuation of our present system. The problem which should concern the public is the problem of how maximum returns may be made for minimum expenditure, and how the best medical service can be procured for those in need of that service. It would seem perfectly obvious that the solution of this problem is not wholly economic, but that it lies in the hands of two groups, namely, the hospital and physician, and the public. The solution depends upon our actions as individuals and as groups—and our endeavor to help the public rather than to immediately help ourselves. The paramount issue is, can we keep local medical care to a local communal problem? We can, but will we?

Here are some of the services that the hospital can render to ambulatory patients of the community, in addition, perhaps, to those you now maintain. You should carefully consider whether or not they can be used to extend your usefulness. These services may be classified as follows:

Diagnostic

1. In many instances, particularly in chronic cases, a diagnosis may be provided on an indigent or near-indigent patient and be returned to his physician for therapy.
2. Group diagnostic efforts may be organized within the out-patient service to assist in diagnosis and outlining of therapy for the near-indigent patient, and return him to his physician for care. The physician in such cases would receive a small fee for this therapy service instead of the patient becoming a clinic responsibility.
3. Where the physician is in need of laboratory, x-ray, or other diagnostic procedures, one or more of which would assist him in arriving at an intelligent diagnosis, such service should be furnished by the hospital through the out-patient service for a fee within the means of the patient and the interpretation forwarded directly to the physician in good standing in the community requesting such service. This would assist particularly with the low-income group.
4. Special problems, particularly in teaching institutions, difficult diagnosis and therapy may lead to the patient remaining under out-patient care, whether he is able to pay a small fee to the physician or not, because the rehabilitation of

the patient is more important than a small medical fee, and teaching permission on the part of the patient should enter into our calculation with him.

Treatment

1. Routine treatment in the out-patient department should be kept to the minimum, and largely confined to well-organized out-patient services with adequate facilities available.
2. Special therapies and limited services, which are centered in the hospital and not found elsewhere in the community, should be open to the physicians of the community in the same way as the diagnostic service mentioned above.
3. Assistance should be given to the public health and other agencies of the community in the care of contagious, venereal, and other diseases.
4. All possible assistance which can be given without abuse to the health agencies of the community should be rendered.
5. A definite educational program in connection with the above, together with correlation of the community needs and the education and cooperation of your medical staff, should be a definite part of your program.

With the hospital as the medical center of the community, with the concentration of the facilities for the practice of scientific medicine, with the needs of group consultation practically in those groups where economically they cannot afford the expense of private individual care, we must have our organizations so geared and our efforts so coordinated that the public may get the best we have to offer. All of us know that the best is available only through properly organized unselfish group contribution to this problem. Are we willing and are we ready to meet it, or will our own selfish individual economic concern lead to a compulsory insurance and a regimentation of medical effort? We have in our hands the weapons. Are we willing to tighten our belts and fight to this end?

The group care of indigents and of the near-indigent groups, whether in out-patient departments of hospitals or otherwise, is with us to stay. How shall we behave to this communal demand as hospitals and as physicians? The proper care of the ambulatory patient is an instrument now in our hands with which we may stay the threat of extra-community interference. Are we to go on drifting, or shall we fight through? Remember that particularly in the voluntary hospital field your decision affects the whole hospital service as well as the out-patient department. Evaluate your position.

The hospital and its out-patient department are with us to stay and in the pages of the New York Hospital Survey, recently made, we find this:

In the light of expanding knowledge in medical science, the hospital is an indispensable public utility, because of the wide variety of resources of diagnosis and treatment it offers. For that reason the organized care of the sick, a generation hence, will best be provided by the orderly growth and coordination of present facilities.

Thus plainly the future of the out-patient service is a community problem in the hands of the hospital and medical profession to guide and direct.

3. Does Your Hospital Need an Out-Patient Department? If So, Why? *by Frederick J. MacCurdy, M.D.**

Does your hospital need an out-patient department? If so, why? These questions are being asked with recurring frequency both from within and from without the hospital, by both lay and professional groups. Is there in it an element which raises the question of adequacy of service, or are we on the verge of an era of self-evaluation? Let us step aside and for a time view, if possible, our subject through perspective of detachment. Forget the annoyances and petty details that so often clog the vision of the hospital worker. Try to obtain a fresh and clearer point of view. Especially if you have an out-patient department already, you owe yourself and your work this analysis.

We should keep in mind the fact that the charitable or public hospital functions as a social service to the community at large, and not for the benefit of a few chosen members of society. Sociologically, just the same as with any other community service, it should exist as an expression of communal demand. If as additional service you already have an out-patient department, remember that the demand was created by the present social order—but not with the idea of perpetuity. We are living in an age of rapid change. Trends must be frequently studied and evaluated. If you have no out-patient service, but have one in mind, be sure that it is in response to a demand from without as well as a desire from within the institution. In order that we may be able to catechize ourselves and really study our position as a hospital, we must consider well the main factors entering into our problem and its solution. Only on such a background can we formulate safe judgment.

Does your hospital need an out-patient department? We may consider the answer to this question from two points of view: (1) What is the objective you have planned and hope to accomplish through any out-patient program—in other words, your *raison d'être*? (2) Having weighed the communal and institutional advantages against the disadvantages, is there a balance in favor of inaugurating or of maintaining such a service?

Let us study the objectives from the standpoint of the hospital itself through a little self-questioning. Has your hospital a medical school affiliation, is this direct or indirect, and what are its values to you? Is or would an out-patient department be a necessary part of the hospital or associated teaching program, i.e., undergraduate, postgraduate, medical, nursing, public health, or other educational service? Is your motive merely one of charity, and if so is it properly directed? Do you intend to give limited special care which is not otherwise provided in the community? Will or does such a department have for its main objective the maintaining of a definite diagnostic service only? Or are you giving or planning a treatment service only? Do you need an out-patient service as a feeder to the ward bed service of the hospital?

As a nonteaching hospital unit, do you need an out-patient department as an integral part of a recognized research and teaching program for staff and community only? Does such a service call for out-patient help to foster a more thorough follow-up and result serv-

* Adapted from *Tr. Am. Hosp. A.* 35:550-554, 1933.

ice? Is it needed as an adjunct for continuity of professional care after bed discharge in the chronic and other indigent protégés of the hospital? Is there a recognized program in your institution of preventive medicine with the teaching and demonstration as a part of the communal educational program?

Has your board of trustees formulated an objective? Do they and the superintendent understand the problems of the out-patient department care? Do they know and understand the communal relations which all bear upon this service and help to determine its usefulness or its uselessness? Are they willing to stand firmly behind such a program and make it effective? If they have or will accept public contributions for such a service, will they in turn see that the funds as given are used for the purpose they were intended—and that a dollar buys for the patient a dollar's worth of service?

As far as the institution itself is concerned, does your board have a knowledge of (1) the financial responsibilities of the undertaking; (2) the need of endowment or other available funds for maintenance of such a service if we would not take needed funds away from the care of the bed patients? (3) Are they expecting such a service to be self-supporting, and if so have they a definite program as to how this will be done, giving due consideration to all the communal ramifications? (4) Are your trustees ready to provide or have they provided adequate space, equipment, personnel, supervision, and other necessary factors to guarantee good work? Have they or will they furnish the doctor with the environment and tools he needs to function properly in a medical capacity only? Will they maintain the same high standards in the out-patient department that they do for the bed care?

Should we not consider the need of the community which the hospital may serve by a survey of the community deficiencies or insufficiencies, if you will, as regards (1) *the patient*. Is there a lack of adequate medical care for the poor and near-poor in the district to be served? Is there a large indigent group which can be more economically cared for in the vicinity with hospital facilities available than through quasi-private care outside the hospital? Do you serve a large low-salary group, or a large seasonally employed group? Has the community, through its physicians for private care, fewer diagnostic facilities than are needed if the hospital equipment is eliminated from the picture? Has your experience evidenced the fact that education of your public has developed a critical attitude toward medical care, and are your services needed to bridge the gap and keep the community satisfied and at home? Can you be of help giving such service in stemming the deflection of the community ill away from medicine and toward the cults, various healing-pathies, and other groups that prey upon medical practice?

What are the medical needs of the social service, social agencies, visiting nursing, and other welfare agencies of the community? Are their needs being adequately cared for now or are they unsolved problems where the hospital rather than the local practitioner may be held the logical agent in their solution?

2. *From the point of view of the physician*. Can and will the local medical profession, without this service being offered by the hospital, meet the medical problems of the com-

munity as fully and as well? If this is so, has a solution been definitely outlined by the profession in relation to both the hospital and the public? What guarantee and written program go with it? What standards have been set for the care of the indigent patient if this service is decentralized? It is recognized that the greatest burden for out-patient care falls upon the specialties of medicine, and not upon general medical and surgical care. Does your community have sufficient care of this character to meet all its needs? Can your community standards of medical practice be graded as "A," and if not, would not group contact improve them with considerable communal benefit? Do you need as many doctors of the present quality when all medical care is considered, or could you not use fewer with better working facilities and closer coordination of effort?

What services are you now offering your doctor in the care of his problems, and how much of his time is he already giving you gratis in the care of yours? What is his individual and group attitude toward your problem and the introduction and maintenance of out-patient clinics? Remember that the standards of the hospital and out-patient are matters that concern primarily the hospital management and that the standards of the single practitioner are his alone.

3. *From the standpoint of the hospital.* What are some of the advantages that the out-patient service of the charitable and the public hospital have to offer? What also in the way of disadvantage? How would you balance these? It may be safely said that teaching in any form demands the centralization of equipment and material, including the patient. The public should be educated by and also about the hospital. Educational programs of public health are a very vital part of the responsibility of the hospital. We have a duty to our public in the teaching and practice of preventive medicine.

Let us divide the advantages of out-patient service to the hospital roughly under the three headings of medical care, teaching, and research.

Medical care

Follow-up results on work done in medical beds.

Establishes continuity of care to the advantage of the hospital in saving dollars of hospital maintenance and the community dollar for unnecessary care of the indigent.

Diagnostic service properly organized can clear all ward patients with diagnoses to the bed service, thereby saving the hospital bed days and lessening the expense to both the hospital and the patient.

Renders a definite diagnostic and advisory unit to the local practitioner.

Offers early diagnosis and care.

Gives a much better return on the charity dollar if by proper care the patient can be kept out of bed.

It permits the concentration of professional, diagnostic, laboratory, consultation, and other facilities which would not otherwise be open to this type of patient in the community.

Establishes a strong communal link between the hospital and the community at large which should be valuable.

- Enlarges the hospital's activities and responsibilities as well as returns to and from the community.
- Permits the training of a younger staff in the ways and methods of the hospital, and in the development and selection of future professional material.
- Properly organized, can be planned on the basis of the individual doctor and patient practically as a family doctor relationship.

Teaching

- Increases the variety and volume of patient teaching material.
- Develops the physician in the art of history taking; the study of sequence and significance of symptoms; in the use of his senses in clinical observation; in the human side of the profession.
- Contacts with senior men for advice and instruction.
- It centralizes staff, nursing and student, and other branches of teaching.
- Promotes public health instruction.
- If properly used raises the general standards of medical care through the institution and the community.
- It should serve as a constant postgraduate course to practicing physicians using its facilities.

Research

- It serves in the study of follow-up or end result of work performed.
- Affords opportunity to apply therapeutics.
- Helps in the evaluation of new methods and keeps the staff constantly informed.
- Permits a suitable number of individual types of cases for the study of given diseases.
- Creates a greater demand for laboratory, diagnostic, and other facilities within the institution and assures greater maximum use of these facilities.
- In addition, we might add the following advantages to the physician: consultation and interchange of opinion to the advantage of both doctor and patient, where personal gain, bias, and other motives are minimum, are valuable educational factors. They conserve the time of the physician in the matter of free or charity work as they permit him to concentrate this effort into limited hours and days. They save him fees and other costs which are transferred to the hospital.

Disadvantages. It increases the hospital's communal responsibility. It may engender criticism by the medical profession if not properly operated. It may prove competitive to the doctor in his practice; abuses of its service may be found either by patient or by physician. Extra investment in space, personnel, equipment, administration, and responsibility, which leads to an increasing operating deficit if financial plan is not sound.

Summary. If after a survey and an honest evaluation of your position as to your motives and objectives you find that you have need for the service, that you have the ability to render adequate dependable service, that such service is within your means, that your trustees know and appreciate the problems and are willing to back them, then after you have assured yourself that the advantages to your hospital and the community outweigh the disadvantages, go ahead. If doubt exists as to whether you can fill a need, and a well-defined

need, stop, look, and listen. You may actually be hindering progress by arousing criticism and therefore jeopardizing good work elsewhere.

For the good of all, study your service, and if the quality is poor, bring it up to your other standards. Do not launch an attempt at poorly organized, inadequate medical care for your community. Make the out-patient care as good as the in-patient care, or let it alone. Let us not be "smitten with our own feathers."

4. Out-Patient Operating Costs, by *Margaret Lovell Plumley**

In the accounting systems of hospitals provision is seldom made for recording separately income and expenses of the out-patient department and of the sponsoring hospital. Some hospitals record only the receipts from out-patients and make no mention of facilities and services contributed by the hospital proper. Only a few set up accounts in such a way that both direct and indirect out-patient department expenses can be ascertained. Salaries may constitute the sole recorded item of expense, notwithstanding the fact that the aggregate value of space, supplies, and utilities contributed by the parent hospital may represent a large proportion of the true operating costs.

The significance of the foregoing general statements is illustrated by the returns from a country-wide study of out-patient departments conducted in 1936 by the U. S. Public Health Service as part of the National Health Inventory. Of 769 hospitals found to operate true out-patient departments, only 174 were in position to supply the type of data necessary for analysis of income and expenditure.

Four-fifths of these 174 departments were located in cities with populations of 100,000 or more. More than one-half were located in New York, Philadelphia, Chicago, Pittsburgh, and Baltimore, and of these the great majority were in the first two cities. Except for size and location, the departments used in this study are fairly descriptive of all organized out-patient departments. Seventy per cent were connected with community hospitals supported and controlled by nonprofit agencies. Those attached to hospitals operated by local and state governments followed in declining order. Departments providing a general service predominated; 80 per cent were of this type. The remainder were special departments operated for the most part by tuberculosis sanatoriums and by hospitals for children.

An out-patient department usually has two main sources of support: receipts from patients and an allotment from the general funds of the hospital. In the early days of out-patient department work, the amount collected from patients was so small that practically the entire cost of operation was, of necessity, paid by the hospital. The data at hand reveal that the situation has changed. In the group of departments on which this study is based, receipts from patients covered nearly 40 per cent of the reported expenditures.

The percentage distribution of income is presented in Table 1. The allotment from hospital funds appeared most frequently to represent a deficit made up by the hospital rather than an amount budgeted in advance. In only nine instances was the total income reported by the hospital for out-patient department use in excess of the total expenditures.

* Adapted from *Mod. Hosp.* 49:65-67, Dec. 1937.

TABLE I. PERCENTAGE OF EXPENDITURES DEFRAID BY INCOME FROM DIFFERENT SOURCES FOR OUT-PATIENT DEPARTMENTS OF 174 HOSPITALS

CONTROL AND TYPE	NUMBER OF DEPART- MENTS	TOTAL EXPENSES	PER CENT EXPENDITURES DEFRAID BY INCOME FROM SPECIFIED SOURCES			
			<i>Patients'</i> <i>fees</i>	<i>Tax</i> <i>funds</i>	<i>Gifts*</i>	<i>Deficit</i> <i>made up by</i> <i>hospital</i>
Total	174	\$8,628,607	38	11	12	39
Government						
General	18	1,212,753	14	51	3	32†
Special	7	69,459	2	75	..	23†
Nongovernment						
General	120	6,459,325	43	4	11	42
Special	29	887,070	42	2	31	25

* Including income from endowments and community chest contributions.

† Tax funds.

Receipts from patients in the government departments covered only a small portion of the total expense. Slightly more than 85 per cent of their income was derived from tax funds, either appropriated specifically to the department or allotted by the sponsoring hospital to make up the deficit. Gifts and contributions to tax-supported departments were negligible. Only three departments, controlled by state university hospitals, reported income from this source. Forty-three per cent of the total sum received by departments of nongovernment hospitals, on the other hand, was made up from patients' fees. Gifts and contributions constituted 14 per cent and appropriations by taxing bodies 4 per cent. Deficits amounting to 39 per cent of total costs were defrayed from general funds of the parent hospital.

The departments attached to hospitals rendering only specialized types of service reported nearly three times as much income, proportionately, from gifts and contributions as the general departments; consequently, the amount of the deficit to be made up from hospital funds was smaller for the attached special departments.

The usual measure of the expense of out-patient department operation is the cost per visit. Table 2 shows the average cost per visit for the departments, classified according to size, together with the reported visits and expenditures which form the basis for this calculation. Unit costs appear to decrease as the departments increase in size. The class with the highest average cost per visit, \$1.46, consists of the smallest departments, those reporting less than 10,000 visits. The lowest average visit cost, 75 cents, was found for the largest departments, those with 100,000 or more visits. This figure is influenced to a considerable extent by the low costs (44 cents) reported by ten government departments. In

TABLE 2. TOTAL VISITS, TOTAL EXPENDITURES, AND AVERAGE COST PER VISIT FOR 174 OUT-PATIENT DEPARTMENTS ACCORDING TO SIZE OF DEPARTMENT

SIZE OF DEPARTMENT	NUMBER OF DEPARTMENTS	TOTAL VISITS	TOTAL EXPENSES	COST PER VISIT
All sizes	174	10,581,700	\$8,628,607	\$.81
Under 10,000 visits	44	204,487	297,659	1.46
10,000-24,999 visits	36	619,091	565,714	.91
25,000-49,999 visits	29	1,011,560	879,504	.87
50,000-99,999 visits	29	2,048,061	1,862,774	.91
100,000 visits and over	36	6,698,501	5,022,956	.75

contrast, the average cost per visit for the twenty-six nongovernment departments was 87 cents. The combined average for all size groups was 81 cents.

A wide range in cost per visit was disclosed by examination of the figures of individual departments. The lowest reported was 21 cents and the highest \$4.48. At the lower end of the range were twenty departments which gave visit costs of less than 50 cents, and at the upper end were thirteen by which corresponding unit costs of more than \$2 were reported. The small departments of special hospitals appeared to be the most expensive to operate, possibly because of fewer patients, more frequent use of special diagnostic and therapeutic procedures, and greater development of social service. Exceptions to this general rule were found, because in every group were individual departments that reported unusually high or low unit costs. Nevertheless, 80 per cent of the forty-four smallest departments reported visit costs of over \$1; less than one-third of the departments in the next higher interval and only one-fourth of the largest listed as high a figure.

The 174 departments under consideration were grouped according to visit costs and the characteristics of each group were studied. Table 3 presents the picture for income and

TABLE 3. EXPENDITURES AND INCOME BY SOURCES OF 174 DEPARTMENTS GROUPED BY VISIT COSTS

COST PER VISIT	NUMBER OF DEPARTMENTS	TOTAL RECEIPTS	PER CENT INCOME DERIVED FROM SPECIFIED SOURCE			
			<i>Patients' fees</i>	<i>Tax funds</i>	<i>Gifts*</i>	<i>Deficit made up by hospital</i>
All costs	174	\$8,628,607	38.4	11.0	12.1	38.5
Under \$.75	57	2,459,301	38.5	22.3	8.2	31.0
\$.75-\$1.50	93	5,514,013	38.8	6.0	12.9	42.4
Over \$1.50	24	655,293	34.1	11.3	20.0	34.7

* Including community chest contributions and income from endowment.

expenditure. Three classes were utilized: those with visit costs of less than 75 cents, those for which costs ranged between 75 cents and \$1.50, and those with costs in excess of \$1.50. Fifty-seven departments fell into the first class, of which nearly 90 per cent were general and, for the most part, controlled by nonprofit agencies including churches. Receipts from patients covered 38 per cent of the total cost of operation, tax funds 22 per cent, and gifts and contributions 8 per cent. The cost per visit ranged from 21 cents to 74 cents. About one-third of the departments reported costs below 50 cents.

The largest number of departments was found in the second class, those with visit costs ranging from 75 cents to \$1.50. Ninety-three departments reported costs within these limits. Nearly four-fifths were general; almost all of them were under government control. The proportion of cost covered by receipts from patients was essentially the same as for the less expensive departments. Relative portions provided by gifts and by tax funds were reversed for the two groups, however. Hospitals were required to meet a greater deficit when visit costs were in the middle range than when they fell in higher or lower price brackets.

Twenty-four departments reported costs of more than \$1.50. Fourteen of these were special departments of which all but four were clinics attached to tuberculosis sanatoriums and children's hospitals. Patients' receipts were 38 per cent of the total expenditure for the nongovernment departments and only 2 per cent for those under government control. Twenty-two per cent of the expenditure for the nongovernment group was defrayed from gifts and contributions, almost all of which were reported by the special departments. The proportion of income from tax funds recorded by the nongovernment group was negligible. Nine of the fourteen special departments reported a cost per visit of more than \$2. Only four general departments were as high.

All except six of the 174 departments reported on the established policy with regard to fees charged per visit. Sixty per cent of the out-patient departments in the reporting group of government hospitals and 4 per cent of those under nongovernment control accepted all patients free of charge. Rates stated by the others ranged from less than 10 cents to more than \$2, but four-fifths of them charged less than \$1. The more common rates were 25 cents, reported by fifty-two, and 50 cents, reported by fifty-seven departments.

Twenty-five departments charged \$1 or more, only six of which reported fees of more than \$2. Of the thirteen charging exactly \$1, one included laboratory tests, two were departments of special hospitals which reduced fees for those unable to pay, and the other ten either operated a definite sliding scale or stated that fees were reduced or remitted for those unable to pay. Four of the twelve charging more than \$1 were either pay clinics or else accepted anyone regardless of his financial status. Two reported that the fee covered the cost of x-ray and physical examination. Four of the others stated that 70 per cent or more of the visits were free. All except one reported either a sliding scale or considerable flexibility in the size of the fee charged. Of the 129 departments charging fees and reporting the proportion of free visits, two-thirds stated that more than 50 per cent of the visits were free.

5. How Clinic Visits Are Distributed, *by Margaret Lovell Plumley**

DATA on the distribution of clinic services in out-patient departments were obtained through a study conducted by the U. S. Public Health Service during 1936 as part of the National Health Inventory. While 769 departments were included in the final report, discussion in this article will be confined to 663 departments reporting separately on the number of visits to the various individual clinics.

The 25,306,810 visits reported by these departments have been classified into sixteen main divisions of service. The various types are distributed in Table 1 by order of magnitude. The number of departments providing service of each type also is shown.

TABLE 1. DISTRIBUTION OF VISITS TO OUT-PATIENT DEPARTMENTS OF ALL TYPES OF HOSPITALS ACCORDING TO SPECIFIED CLINIC SERVICE

CLINIC DIVISIONS	NUMBER OF DEPARTMENTS REPORTING	VISITS REPORTED	
		<i>Number</i>	<i>Per Cent</i>
All divisions	663	25,306,810	100.0
Medicine	500	5,323,981	21.1
Surgery	459	4,029,401	15.9
Dermatology, syphilis	420	2,849,094	11.3
Gynecology, obstetrics	440	1,848,010	7.3
Ear, nose, throat	443	1,780,365	7.0
Eye	348	1,533,402	6.1
Pediatrics	385	1,409,252	5.6
Dentistry	329	1,354,883	5.4
Genito-urinary system	337	1,148,725	4.5
Orthopedics	391	1,089,005	4.3
Therapeutics	203	1,043,921	4.1
Tuberculosis	201	485,364	1.9
X-ray	160	467,536	1.8
Neurology	248	275,935	1.1
Psychiatry	145	186,276	0.7
Miscellaneous	53	481,660	1.9

Twenty-one per cent of all classified visits were made to the division of medicine and 16 per cent to surgery. Visits to dermatology and syphilis clinics were tabulated as one service since the work of the syphilis clinic is frequently carried on in dermatology. This combination is accountable for its being third highest in number of visits. The volume of service rendered in other branches gradually declines. However, if eye clinics were combined with ear, nose, and throat (as is sometimes done) the resulting proportion of service would follow surgery. It is recognized that the count of visits to tuberculosis clinics is per-

* Adapted from *Mod. Hosp.* 50:76-78, Jan. 1938.

haps lower than the true situation warrants, since many hospitals examine and treat tuberculous patients in the general medical clinic.

When services of the various divisions were allocated to the type of sponsoring hospital, it was disclosed that 94 per cent of the 5,500,000 visits to divisions of medicine were reported by out-patient departments of general hospitals and 5 per cent by hospitals limiting service to children. Approximately 95 per cent of the visits to surgery, to dermatology and syphilis, and to the genito-urinary divisions were also reported by general hospitals. In fact, hospitals providing general bed care accounted for three-fourths or more of the visits to every division except eye and tuberculosis. In comparison, the volume of out-patient department service rendered in special hospitals is not great, even for the particular types of care to which the work of such hospitals is limited.

TABLE 2. DISTRIBUTION OF VISITS TO OUT-PATIENT DEPARTMENTS OF GENERAL HOSPITALS
ACCORDING TO SPECIFIED CLINIC SERVICE

CLINIC DIVISIONS	NUMBER OF DEPARTMENTS REPORTING	VISITS REPORTED	
		<i>Number</i>	<i>Per Cent</i>
All divisions	499	22,605,870	100.0
Medicine	461	5,006,870	22.2
Surgery	426	3,817,870	16.9
Dermatology, syphilis	381	2,696,244	11.9
Gynecology, obstetrics	414	1,740,780	7.7
Ear, nose, throat	398	1,425,126	6.3
Pediatrics	358	1,285,484	5.7
Dentistry	299	1,197,644	5.3
Genito-urinary system	321	1,108,037	4.9
Eye	314	1,061,902	4.7
Therapeutics	181	947,918	4.2
Orthopedics	350	838,883	3.7
X-ray	126	370,092	1.6
Neurology	225	250,619	1.1
Tuberculosis	140	247,778	1.1
Psychiatry	115	141,985	0.6
Miscellaneous	43	470,753	2.1

By referring to Table 2 it may be noted that about 22,600,000 visits were made to the 499 general hospitals that classified their visits. More than one-fifth of the visits were made to medical clinics, while surgery, followed by dermatology and syphilis, ranked in successive order. Six other divisions for which more than a million visits each were reported are: gynecology and obstetrics; ear, nose, throat; pediatrics; dentistry; genito-urinary system; and eye. Relatively few visits were made to clinics maintained in general hospitals for psychiatry, neurology, and tuberculosis.

Ninety per cent of the departments attached to general hospitals provided a similar type of service; the other 10 per cent consisted of one or more special clinics. The size of general departments as expressed by patient-visits during the study year ranged from about 700 to approximately 360,000 each. As might be expected, these general departments, as a group, reported visits to clinics in all the divisions of service, but individual departments did not always record visits to every division. The relatively few special out-patient departments in general hospitals were uniformly small, with less than 10,000 visits during the year. Service in these departments was usually restricted to such specialties as orthopedics, mental hygiene, tuberculosis, obstetrics, syphilis, or tumor cases. Twenty-nine children's hospitals returned usable data relative to clinic service. This group reported about 860,000 clinic visits. Clinic service in children's hospitals is concentrated in relatively few clinics as contrasted with the practice in general hospitals. Two-fifths of all visits were made to the divisions of medicine and pediatrics, including child health. Dentistry was the service sought next in frequency, while surgical clinics reported the third highest number of visits. Little difference was noted in the relative amount of service rendered by clinics devoted to orthopedics, ear, nose, and throat conditions, and dermatology and syphilis. These three divisions were responsible for no more than one-fifth of all the visits to the out-patient departments of children's hospitals. Complete distribution of visits among the several divisions is presented in Table 3.

TABLE 3. DISTRIBUTION OF VISITS TO OUT-PATIENT DEPARTMENTS OF CHILDREN'S HOSPITALS
ACCORDING TO SPECIFIED CLINIC SERVICE

CLINIC DIVISIONS	NUMBER OF DEPARTMENTS REPORTING	VISITS REPORTED	
		<i>Number</i>	<i>Per Cent</i>
All divisions	29	860,050	100.0
Medicine, pediatrics	25	359,097	41.7
Dentistry	19	131,763	15.3
Surgery	19	83,429	9.7
Orthopedics	20	64,096	7.5
Ear, nose, throat	21	60,529	7.0
Dermatology, syphilis	19	60,441	7.0
Eye	18	30,506	3.5
Therapeutics	12	24,760	2.9
X-ray	13	13,446	1.6
Psychiatry	14	12,172	1.4
Immunization	6	8,089	0.9
Gynecology, obstetrics	4	4,801	0.6
Neurology	12	3,231	0.4
Genito-urinary system	9	3,057	0.4
Tuberculosis	3	633	0.1

Twenty hospitals for children operated out-patient departments in which pediatrics and the several specialties were represented. The other departments rendered services more limited in type. When special departments only were maintained, almost all the visits were recorded for one of the following types of service: pediatrics, child health, dentistry, child guidance, and orthopedics.

Sixteen out-patient departments attached to hospitals which limited service to eye or to eye, ear, nose, and throat conditions reported a total of nearly 775,000 clinic visits. Fifty-six per cent were reported for eye clinics and 37 per cent for ear, nose, and throat clinics. Half of the remaining 7 per cent were made to the divisions of dermatology and syphilis. Few clinics of other types were maintained. Out-patient departments of general hospitals reported five times as many visits to clinics in the ear, nose, and throat division and twice as many to those for eye conditions as were reported for the clinics attached to this group of hospitals. The size of individual clinics in eye, ear, nose, and throat hospitals varied from less than 25,000 to more than 90,000 visits each. Less than one-half of the departments maintained by hospitals of this type reported under 25,000 visits during the year, while about one-third of them reported more than 90,000 visits each.

More than four-fifths of the nearly 300,000 out-patient visits reported by fifty-seven tuberculosis sanatoriums were made to clinics that confined examination and treatment to tuberculous patients. Thirty-nine hospitals stated that this was the only type of clinic operated. Forty-seven stated that x-ray service was available. Twelve of them also recorded separate visits to the x-ray unit, which apparently constituted a distinct clinic service in the out-patient departments of these institutions.

The seventeen orthopedic hospitals with out-patient departments reported a total of over 250,000 visits, 70 per cent of which were made to clinics in the orthopedic division. Twenty-one per cent were reported for physiotherapy and other services classified under the division of therapeutics. Clinic service in orthopedic hospitals is largely confined to this specialty, although in a few instances general service or service in a few specialties of other type is provided. In all except three hospitals admission to the out-patient department was definitely restricted to children or to persons under twenty-one years of age. Clinics in orthopedic hospitals were relatively small. The number of visits to these hospitals amounted to only one-fifth of the number reported for clinics of the same designation in general hospitals.

Hospitals rendering other types of specialized medical care are considered collectively since relatively little clinic service is rendered by each type. The number of out-patient visits reported by all remaining hospitals combined resulted in a total of 450,000.

More than one-third of this number, or 160,000 visits, were made to the clinics of seven skin and cancer hospitals. Service in these clinics was largely confined to the specialties for which these hospitals are maintained. Visits to separately organized cancer clinics and to the x-ray division constituted four-fifths of the total reported. No doubt considerable treatment of cancer is carried on by general hospitals in the divisions of surgery, gynecology,

and x-ray. Because of the inconsistencies in reporting cancer treatment, comparison of the clinic services rendered by the two types of hospitals for this condition would have little significance.

The departments of sixteen maternity hospitals reported a total of about 100,000 visits to individual clinics. Nearly 90 per cent of these visits were made to the divisions of gynecology and obstetrics. A few were also reported for clinics devoted to x-ray, syphilis, child health, pediatrics, orthopedics, medicine, and surgery. Nearly twenty times as many visits were made to the divisions of gynecology and obstetrics in general hospitals as were reported for these divisions in the out-patient departments of maternity hospitals.

Fifteen mental hospitals reported a total of more than 45,000 individual clinic visits. More than two-thirds of these were made to psychiatric clinics and the remainder to a neurological clinic and to five syphilis clinics. Visits made to clinics of mental hospitals constitute only a small proportion of the psychiatric service rendered. More than four times as many were reported by general hospitals.

There were eight hospitals in which the service rendered to bed patients was restricted to rather unusual combinations of specialties. As a result, their out-patient departments could not be included in any of the categories previously described. The following types of hospital service were represented: diagnostics, neurology, neurology and orthopedics, chronic diseases, chronic diseases and orthopedics, isolation and venereal disease, cardiology and gynecology. The out-patient department associated with the small diagnostic hospital reported more than 100,000 visits. With this exception the departments of this miscellaneous group were generally small. This is particularly true of the clinics in maternity and mental hospitals.

From the data presented in this article, it is evident that the departments of general hospitals occupy a predominant position. In comparison, the service rendered by clinics attached to special hospitals is slight. In fact, fewer visits were recorded by departments of special hospitals, even for those divisions of service to which the bed care of the hospitals was restricted, than for the corresponding divisions of the general group.

6. Service to the Syphilitic, by R. A. Vonderlehr, M.D.*

WHEN the patient with tuberculosis goes to a hospital, he goes to stay for a long time. His treatment is an extended one. He will be contagious until arrest is attained. When a patient with smallpox, typhoid fever, or poliomyelitis enters a hospital, he is an acute problem of infection for a short period. As an in-patient he belongs in the isolation ward.

Syphilis is a different problem. Save in rare cases, there is no need for in-patient treatment. Treatment may be given which renders the patient noninfectious almost immediately and he remains only during the actual time required for the administration of treatment. Between visits to the out-patient department the syphilitic patient is at work, living

* Adapted from *Mod. Hosp.* 49:44-45, Sept. 1937.

a relatively normal life. Because syphilis presents a different yet easier problem, many hospital staffs have not fully appreciated the great assistance they can render the community through effective cooperation with health departments in syphilis control.

Every syphilologist and well-informed health officer appreciates the need for making provisions within the hospital for facilities for diagnosis and treatment of patients infected with syphilis. The requirement that a routine serologic test for syphilis be done on every person admitted to a hospital would yield greater returns in the prevention of human misery than any other single measure of comparable simplicity. Nor should the importance of the darkfield examination for the detection of the *Spirochaeta pallida* be forgotten.

Once the diagnosis is established the hospital staff is required to provide treatment. Most syphilis patients are unable to pay the regular fees of a private physician for a prolonged course of treatment even though they remain at their regular work. The hospital, therefore, is confronted with the problem of providing care for a large number of medically indigent patients. To fill needs efficiently, service must be provided for: (1) the diagnosis and emergency treatment of any patient who applies; (2) any patient with syphilis who is referred by a private physician either for continuous treatment or for consultative advice and opinion; (3) any patient who is unable to afford private medical care.

In the past, considerable sums have been made available to hospitals by unofficial and voluntary agencies. The neglect of the syphilis patient in many institutions in the past and the poorly organized clinics in many hospitals point to a grave need for supplementing voluntary funds. Funds should be made available to the health department for extending direct subsidies to hospitals that conduct efficiently operated clinics and render other valuable service. Hospital directors should insist that they be given a voice in the organization of public health programs, such as the control of syphilis, in which the hospital holds a position of great importance.

It is in the out-patient clinic that syphilis control work is conducted on such a large scale. The polyclinic holds a position of much advantage in serving syphilis patients. Its performance cannot be equaled by a syphilis clinic detached from a hospital unless the latter is conducted in a way many times more efficient than is customary. The polyclinic protects the identity of the patient and does not disclose to the public the fact that he is infected with syphilis. It provides special consultation service with the manifold specialties related to syphilology. When located in a hospital the polyclinic may be closely coordinated with the in-patient activities in such way as to ensure the immediate provision of in-patient treatment in the cases in which this is indicated. Within the syphilis section of the polyclinic, privacy for the patient is essential when the examination is conducted or when treatment is administered, and a reasonable degree of privacy in the waiting room adds much to the attendance at the clinic. Especially to be avoided are long and unnecessary periods of waiting for the administration of routine treatment, not only because this is unpleasant and vexatious to the patient but also because it may add to his economic embarrassment and interfere seriously with his ability to hold a job. Both day and night clinics are essential to pre-

vent loss of time from work and to assist the patient to maintain employment. Patients who have not attained the age of puberty, if they are to be treated in the regular syphilis clinic, should be cared for during hours when adult patients are not admitted. Saturday mornings are an ideal time. The pregnant woman coming for prenatal care, if infected with syphilis, also should be given treatment either in the regular prenatal clinic or, if this is impossible, in the syphilis clinic at a time when other adult patients are not treated.

Physicians serving in the syphilis clinic should be thoroughly qualified as physicians and proficient in the specialty to which they limit their work. They should be tactful and sympathetic. They should be paid fair monetary compensation for services rendered, and the clinic chief should insist upon their regular attendance during the entire clinic session.

The medical social service is second in importance only to treatment. No clinic can give effective treatment without a well-trained staff capable of performing the intricate duties connected with case finding and case holding. All medical follow-up workers should be full-time employees especially trained in this work.

Standardization of syphilis treatment, in so far as it is practicable, is highly desirable. The findings of the committee on syphilis and cognate subjects of the medical organization of the League of Nations and the work of the Cooperative Clinical Group in the United States on studies of the treatment of syphilis indicate that the continuous alternating method of therapy now advocated by the Public Health Service is the most effective scheme of treatment in early syphilis.

To ensure the completion of adequate standard treatment a system of keeping records should be adapted to such schemes and particular attention paid to transient, transferred, and incompletely treated patients. To patients coming within the latter categories the original clinic should give a statement or a record of the treatment that has been received as a factor in promoting the continuity of therapy. An interclinic system of comparative notification aids thorough treatment.

The hospital should be prepared to receive patients with syphilis who, because of some serious complication or because of some untoward result developing during the course of treatment, require in-patient service. Not only should in-patient treatment be made available for those who have been rendered service in the polyclinic of the hospital, but hospital authorities should cooperate with separate clinics.

An effective and well-developed program against syphilis implies much more than the routine administration of treatment to the patient with early and latent syphilis and to the syphilitic expectant mother. It contemplates the reasonable provision of complex diagnostic laboratory services which can be rendered by a well-equipped hospital only. Studies of the spinal fluid, roentgenologic examinations of the cardiovascular stripe and long bones, and other special laboratory facilities should be available. Provision of this service is not only an obligation of the health department but a peculiar responsibility of the department of public welfare since individuals with asymptomatic central nervous system syphilis and incipient cardiovascular disease are potential candidates for the mental or general hospital

a few years later. A half-dozen hospitals equipped to do this special diagnostic laboratory work easily might serve the average state if provisions were made for the transportation of indigent patients.

It is my contention that the hospitals of the country have no greater opportunity to assist in the control and prevention of disease, to promote the welfare of the people, and to provide for the efficient care of the sick than they have in rendering service to the syphilitic patient. The health department is an agency interested in all the aims and purposes of the American Hospital Association that have to do with the control and prevention of communicable disease. These two agencies should work vigorously in the attainment of the following goals: (1) nation-wide adoption of the routine serologic test for syphilis in all institutions; (2) administration of treatment for syphilis to all patients who are medically indigent; (3) provision of humane care for all syphilitic persons requiring hospital in-patient treatment; (4) development of efficiently operated syphilis sections in polyclinics; and (5) adoption of standard methods for diagnosis and treatment in so far as present knowledge permits.

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CHAPTER XII. SPECIAL SERVICES

I. Crusading for the Chronically Sick, *by S. S. Goldwater, M.D.**

CHRONIC diseases are growing at a rate which suggests that America may some day become essentially a nation of invalids. If, as students of history claim, national downfall is the inevitable lot of a devitalized people, it is incumbent on health departments and the medical profession to try to prevent the further physical deterioration of our people. This is possible only through proper hospitalization of the chronically ill and the development of research in this field, too long neglected by organized medicine.

Great progress has been made in the last thirty years in checking contagious diseases and other ailments of childhood. We live longer, but we do not grow stronger. In New York City, which fairly reflects conditions throughout the nation, the death rate from all causes fell from 29.25 per thousand of the population in 1868 to 10.92 per thousand of the population in 1931. But chronic diseases, which in 1870 caused only one-fifteenth of all recorded deaths, now account for more than half of the total mortality. The hospitalization of chronics has grown correspondingly, so that today more than 50 per cent of the hospital beds in the United States are at any one time occupied by patients suffering from chronic physical and mental disorders.

There are a number of simple reasons why hospitalization for chronics presents a particularly difficult problem. Each chronic patient must be hospitalized not for a few days, as is the case in acute diseases, but for months or years. This raises the cost of individual service to staggering figures. The chronically ill patient can seldom pay for his hospital care. Voluntary or privately supported hospitals, finding that the admission of a single chronic case compels them to exclude three, five, or ten acute cases, prefer to limit their service to the treatment of acute or short-time illnesses, and the chronically ill patient is forced to turn to the government. In general hospitals, whose facilities are devoted almost wholly to the care of acute diseases, the average length of a patient's stay is only 14 days, but in New York City's municipal hospitals, which represent a mixture of acute and chronic services, the average length of treatment for each patient in the combined hospital system is 23 days. Patients suffering from such chronic conditions as heart disease, diseases of the nervous system, rheumatism, diseases of the kidneys, glandular disturbances, drug addiction, orthopedic diseases, diabetes, and cancer are guests of the city for months at a time, in some cases for years.

I can refer here only briefly to the most troublesome and costly of all chronic diseases, namely, mental disease. For nervous and mental cases the United States has provided, chiefly in state institutions, a total of 513,000 beds. The most striking thing about mental hospitals is their startling growth from 373,000 beds in 1927 to 513,000 beds in 1933.

* Adapted from *Mod. Hosp.* 44:65-67, May 1935.

Project this curve of growth into the future for twenty years more and instead of half a million mental hospital cases, we shall have a million. If we do not wish to see a million Americans in mental hospitals in 1955 we must vigorously support every social agency, every educational committee, and every medical group studying the problem of mental hygiene for children and adolescents, for it is during these critical early years that the mental future of individuals is to a great extent determined.

Next to mental diseases, the largest definite provision for a special class of chronic cases is for the tuberculous. The capacity of hospitals and sanatoriums in the United States for persons with this disease is 70,000 beds. Tuberculosis admissions in 1934 were 82,000 as compared with only 50,000 in 1927. In 1933 the American Medical Association began a survey of tuberculosis hospitalization. There are reasons to believe the results of this survey will show the need of facilities greatly in excess of those now available. The collapse method of treating tuberculosis of the lungs is now widely and increasingly used. Active treatment of this kind which tends to displace the relatively passive and prolonged treatment that relied chiefly upon rest, nutrition, and fresh air permits general hospitals to participate more actively in the treatment of this disease.

In the related question of private medical practice, physicians testify that with contagious diseases under effective control and mothers constantly acquiring an increasing mastery of the hygiene of infancy and childhood, private practice is becoming more and more an affair of the treatment of chronic diseases. We know that chronic disease incapacitates most of its victims and impoverishes many of them. If the physician must live on this type of practice his financial outlook is far from bright. The great mass of sufferers from chronic disease are persons with slender incomes, and for them three lines of conduct are open: they can patiently endure their misery without making any serious effort to obtain relief; they can accept such treatment as a crowded and overworked free dispensary offers; or they can seek admission to a hospital which is willing to accept chronic cases (or which is forced to do so because of its public character). What happens to them then is not a particularly inspiring story, for, as doctors and social workers both know, chronic hospitals are the neglected stepchildren of organized medicine.

Speaking for New York City, I confess that what we are doing for our chronically ill patients is far from enough. Our chronic disease hospitals occupy antiquated buildings which should be replaced. Their laboratory facilities are inadequate. Their resident medical and nursing staffs are insufficient to ensure a full measure of kindly and efficient care. I believe I am justified in saying that not only in New York, but throughout the country, similar conditions prevail.

Clinically speaking, the familiar type of chronic hospital presents a miscellany of chronic cases superficially observed and relatively neglected. The conditions in these hospitals are certainly not such as to elicit the best efforts of the medical staff. Picture the mental reaction of a physician who is confronted with a score of puzzling problems at one time, and who has no means at his disposal for the serious consideration or concentrated study of any one of them. He is so overcome by a sense of his helplessness that he is more than

likely to shrug his shoulders and content himself with prescribing placebos. From his contact with a great mass of institutionally undifferentiated clinical cases the physician learns almost nothing. I am absolutely sure that the defeatist attitude of most physicians toward chronic disease hospitals would change completely if the cases could be sorted out and classified so as to facilitate close observation and study. If anywhere in the United States there is a community that is handling this problem satisfactorily, I should like to know of it.

We must not look to private philanthropy for the solution of the problem. Private philanthropy can help, and in New York City it has helped by sponsoring at least one general hospital for chronic diseases which aims at scientific treatment rather than mere custodial care, but the problem is so vast that nothing less than a government-sponsored program will suffice.

I shall try to state briefly the essentials of a community program for dealing with chronic diseases, and I ask its consideration by every city in the country which accepts the principle of public responsibility for the care of its sick. Mary C. Jarrett of the Welfare Council of New York City has outlined, with the aid of an expert medical committee, a method of approach which the Department of Hospitals of New York City has adopted as its own. It is, I believe, as applicable to the needs of Philadelphia, St. Louis, Des Moines, or any large city as to those of New York. This is the program:

1. It is assumed that society has the same responsibility for the chronically ill as it has for the acutely ill.
2. Every responsible public health official must be made to see that chronic disease, with its resultant disability, suffering, and economic loss, constitutes a great uncultivated field for profitable public health work. Public health education is making remarkable progress in the special field of cancer. Why not extend the program of public health education to other chronic diseases?
3. In a strictly scientific spirit we should try to find out exactly how social and economic factors contribute to chronic illness. We should ascertain whether the crippling effects of chronic disease can be lessened by reasonable and feasible improvements in the conditions of living and working.
4. We must cease throwing every imaginable type of chronically ill patient into the hopper of an unclassified hospital service, for this is the very essence of the problem of proper hospitalization for the chronically ill. Confusion, frustration, and despair are the inevitable results of so insensate a policy. Intelligent classification is indispensable to close and useful study. Without such study we cannot hope to improve our methods of treatment.
5. Different forms of chronic disease require specialized measures of prevention and treatment.
6. A spirit of inquiry must be fostered and money must be found for the support of intelligently planned research projects.
7. To lavish all our resources on acute illness while we neglect the chronically ill is neither wise nor just. Many communities inconsistently spend millions for the construction

and maintenance of hospitals for the acutely ill while begrudging even small sums for the care of chronics. Neglected, dilapidated, hopeless in outlook, the chronic hospital often arouses a feeling of repugnance if not one of downright disgust. We must change all this by making the chronic hospital a center for medical research in its special and transcendently important field.

8. Homes for incurables should restrict their activities to the nursing and attendant care of suitable cases. No one should be admitted to such a home without an adequate qualifying diagnosis. A mistaken diagnosis may be equivalent to signing the patient's death warrant.

9. Every home for the aged should have a medical service sufficient for its daily needs and should be closely affiliated with a well-organized chronic hospital which is equipped for all emergencies.

10. Chronic disease affects children as well as adults, and it is necessary to differentiate the physical, mental, and social factors which affect childhood, youth, middle age, and old age.

11. Since mental factors play an important role in the causation of chronic disease, an effort should be made to integrate mental health services with medical services in the study and treatment of chronic diseases.

12. From improved methods of treatment we may safely anticipate a shorter average length of hospital stay, a diminution of suffering, and a lessening of physical incapacity. There is another way in which the hospitalization of the chronically ill may be reduced and that is through increasing the facilities for home medical care. Care at home is the happiest solution for the patient and his family in many cases.

I ask you to consider whether your city is doing its duty by the chronically sick. What does your family doctor think about it? Is your pastor satisfied with existing conditions? I urge the Rotary clubs and women's clubs and civic organizations generally to demand appropriate action by the medical profession which, up to the present time, has signally failed to discharge its responsibilities toward the chronically sick.

2. Dealing with Mental Diseases, by *Adolf Meyer, M.D.**

MENTAL diseases were among the first to challenge the administrative interest of physicians. *The Modern Hospital*, the first journal dealing with administrative leadership in our large hospitals, has a record of genuine interest in the psychiatric field from the very first volume and gave early evidence of the increasing need for administrative attention in this field.

For centuries mental disease was doubly stigmatized: (1) by family concealment, and (2) by the difficulty of getting psychology to define itself. Science and the psychologists either quarreled with philosophy and religion or let themselves be unduly influenced by them and they made a confusing and ineffective puzzle of the psycho-functions. The gen-

* Adapted from *Mod. Hosp.* 51:87-89, Sept. 1938.

eral supposition was that it is useless to try to understand the behavior and utterances of those mentally ill. Physicians had a preconceived determination to ignore the personal and often obvious facts and to look for less personal causes. This attitude had to be overcome.

The first goal of psychiatry was to relate the abnormal facts to the corresponding normalities rather than to new puzzles, such as the unconscious, or to really unknown hypothetical brain conditions. The physician had to scan the behavior and mentation of the person for openings to redirection along normal channels, and then had to try to remove obstacles and to activate the patient's normal assets. The background, it was found, would yield the facts to fill out the gaps of the "experiment," with due attention also to neurology and physiology, but full attention also to what had been singled out in too great abstraction, as "minding functions," or mind, falsely treated as a quasi-substance instead of a functional state.

It was difficult to obtain an acceptance of man and mentality within the scope of the natural sciences. There was an unfortunate tendency to yield to appearances and tradition by making an abysmal contrast between mind and body, following the dualism of Descartes with his body as the reflex apparatus and the mind as the function of the psyche. This becomes awkward for those who know the dependence of the mental functions on special parts of the organism. The sense organs and the brain and limbs and the role of the viscera in emotion are obvious. Yet there was also a paradox in the still overly static pathology based so largely on necropsies with its dogma that the mind could not be diseased; that only the brain could be an object of pathology. This type of mere structure pathology was forced to say that there is "no pathology of insanity as yet." Function is as real as substance.

These perplexities were largely disposed of by those of us who were familiar with the field and working in it. But it was hard to convince a philosophy-ridden and not as yet radically experimental science, as well as the followers of animistic conceptions, that there should be a middle ground. It was hard to overcome the conflicting attitude of the static psychologists and the skepticism among the physical sciences and to give a status to the facts as found and actually used in life generally and in medical work. These were difficult tasks until we insisted on a frank espousal of an experimental biology and pathology.

Some of us clearly saw no justification for abandoning the data and concepts of critical everyday life and the language and reasoning based thereon. We demanded an adjustment of the concepts and methods of science to the facts on hand and an approximation of the experience with patients to what we know of the normal. We deplored that Freud also minimized our direct knowledge derived from the normal by overemphasis on an obligatory hypothesis of the unconscious. His was another evasion of the available data in favor of the interpretation of a psychopathology as the upshot of the unconscious parts of the sex-instinct and the intriguing but too mechanistically static system of psychoanalysis. Without any dogmatic disavowal of the data of the psychological camps and of the Freudians within their limited spheres, but with an increasing understanding of human and animal life, normal and abnormal, we proceeded to the facts in terms of the concept of

psychobiology and psychiatry, suggesting that the disorders involved should be viewed as sets of reaction with cause and effect and as experiment-like events variously open to modifiability.

Our determination to study the facts and events as found offers the best reduction to terms of a biographic development or event, to be studied, as any other episode or event, in concrete human beings. They are to be scrutinized for their objective reality and studied as objectively as any "experiment of nature." The facts involved, the condition of their occurrence, their working and results, their bearing and their modifiability offer the points of attack for treatment and improvement.

These are what active psychiatry allows us and wants us to do: (1) to use all the technical medical training we have, (2) to let it be part of well-trained and critical common sense, making use of our natural curiosity and resourcefulness of participating in the events, and (3) to allow the patient the status of collaborator to the best of our judgment.

If we want to understand man and to make ourselves useful, we have to train our objectivity and our own best sense on matters of the personality, including the situation the patient has to face. This means an understanding of the home and the working group, with as much of the actual life as may have to be included for an intelligent picture. The person is not just a mind with memories and outlook and fancies in the abstract but a live organism in action. In a patient with disturbed person function, we must be able to pull together the facts in a way that allows us to reconstruct the entire development and to focus on what needs heeding, avoiding, or using, as we would in handling a case of dislocation of a joint or in treating the functioning of a heart or a kidney. This is what is meant by reduction of the facts to terms of an episode in a life, to terms of an experiment of nature and of the person and the group.

Internists and surgeons alike have learned a great deal about how often the complaints of the patient and the courses of the symptoms depend on the person and on person-function. "Neurologists" and psychiatrists also have learned not to run at once to hypotheses and assumptions of somatic disorders when they deal with emotional and other tangles.

Psychiatry aims to restore the physician's common sense, to make his medical routine and technicality a part of real life, and to make the life, interests, and difficulties of the patient, his organs and his settings, part of a perfectly sensible procedure. Human mentality is viewed as a natural and essential part of temperament and character, including the patient's personal philosophy and religion. Most of this need not be twisted into any esoteric and one-sided system of psychology and psychopathology. We learn to penetrate, comprehend, and select what is needed to help the patient build bridges or outlooks in harmony with the facts and resources and necessities.

True psychiatry begins when we cease mere "proving of insanity" and when we cease to consider it a "diagnosis" to call a depression "melancholia" and a delusional state "schizophrenia." Psychiatry begins when we demand an intelligent reconstruction or genetic-dynamic formulation, with evidence, to be sure, of our knowing the technical and ultimate implications. In this setting our therapy has become more and more natural but also has

been enriched with important procedures. Some of these bring the case closer to what the general hospital with its atmosphere of direct action can furnish. But also there will always be a need for the more broadly human use of the twenty-four hours of the day, with sleep, rest, play, some work and social contact. For this we need a special temperament of personnel and a special atmosphere (one different from the hasty and prejudiced impressions many people receive from a visit to one of our special hospitals). It becomes obvious that it is better to treat the patient close to the home or to the persons of his set when the time for contacts comes. Visitors are no longer largely a nuisance. Protection from the good intentions of friends can be a vital part of treatment, but their use is also obvious.

For all of this, some hospitals are better equipped than others. The special hospitals, even if they bring contact with other patients that may be worse or better, are likely to be the best for the needs of the case and for contacts with trained physicians and nurses. They are more likely to provide unobtrusive protection and play and occupation of a type that spells opportunity for normal functioning and normal living, even of the less favored. It is important for the patient to have some contact with kindred patients and to learn to appreciate that he is not "the only one." He should learn that mental illness is not just one dismal predicament spelling "insanity," but that there are many different ways of taking the facts and using them under a melioristic rather than pejorative attitude and environment.

While it is important for the family to have adequate orientation as to the outlook and what they should be prepared for in regard to duration and types of therapy and in the wise outlay of money, the atmosphere about the patient should be free of fatalistic labels and terms. Rather it should impart a conviction that there is no case that will not be better as a result of proper study and understanding and of a routine, special treatment and advice. We no longer speak so much of the "early recoverable and mild case" because of an inevitable implication of gloom on other cases not of that description. We realize that some of the most disturbing and apparently alarming conditions can belong to the most recoverable processes.

Certainly every hospital should be prepared with provisions for the treatment of deliriums, emergencies of excitement or agitation, and abrupt suicidal or aggressive states. Some hospitals will offer more of what is needed for a fuller and more far-reaching betterment. Some special ones will actually be devoted to the full rank and file of all types.

The hospital of today has acquired a good many features derived from the specific change of attitude mentioned, namely, consideration of the patient as an important collaborator and not only as the possessor of an organ or function in trouble. Those in charge sense the difference between sick persons and sick organs and the need to follow the tempo and setting of person function. This need is not always best met by bed treatment and by aggressive methods. We know today that mental problems produced by protracted influences may be favorably influenced by fever and shock methods but that in the long run the use of the patient's pace is better than the shortcut of argument and coercion.

The administrator has in this respect an important task. He has to be the moderator between the community at large and the hospital community. The community, if guided by

the practitioner or collaborating with him, will learn to respect the different types of hospital provisions rather than mark some of them adversely. In the field of psychiatry this may lead to a more sensible way of rating hospital facilities. The existing large hospitals will figure as centers with a wide range of provisions and opportunities while the average general hospital will represent more concentrated action (examinations and technical exploration and aggressive treatments but less opportunity for the more time-consuming adjustments). Instead of looking at the state hospitals and sanitariums as homes for chronic patients, hospital administrators, physicians, and the public must learn to appreciate the active and intentional nature of their treatment, which gives due opportunities for time-consuming guidance of self-adjustment with as much of normal resources as possible.

The advent of aggressive fever and shock treatment brings to psychiatrists today a great temptation to utilize general hospitals. If it is done with due recognition of the drawbacks and is free of any tendency to derogative and pejorative comparisons resuscitating the old prejudices about the special hospitals and the less responsive cases, there will be a gain. Otherwise, the extension of general hospital provisions may wrongly accentuate a discrimination against the larger hospitals and a corresponding lowering of their support and the zest of their services. What is worse, it may reemphasize old prejudices.

Whoever has to accept responsibility in a case of mental disorder does well to consider the situation as comparable to the problem of a surgeon who may have to open an abdomen. Whoever does that must be prepared for the main emergencies. The same holds for the hospital that lets it be known that it receives mental cases, especially those hospitals that promise some of the aggressive methods of treatment, such as fever or shock therapies. They should not do so unless they also are prepared to meet emergencies.

One or two rooms that are soundproofed and air-conditioned should be available in any community hospital for the care of patients in delirium (not for mere seclusion!). The same may hold for continuous baths. The fact that most psychiatric cases are not at their best with mere bed treatment necessitates provisions for dayroom and occupation space. Some garden space and playground facilities become vitally desirable. Nonostentatious security from suicide, window protection, and avoidance of staircases and other issues should be studied with the advisers on construction and management of the National Committee for Mental Hygiene and other agencies.

From the point of view of the administrator, the first question is that of available personnel. Human beings are more important and more problematic than the bricks and mortar. The diplomas of boards of specialists may help but do not guarantee that every candidate will be the best a hospital and its staff may want to work with. The tendency toward exclusive professionalism among the nurses can become a problem. It can be met only by training less demanding helpers also and by providing satisfactory opportunities of work and by the encouragement of all personnel to share responsibilities. The director of a hospital must be in a position to take for granted that every person connected with a division for mental cases must be able to meet the whole range of special responsibility, from nursing to enforcing ordinary hospital rules, accounting for material and observing cautions in

regard to the patients. The same holds for the keeping of records. In these days in which we are glad to allow patients to choose their hospital, there is but one way to avoid justified envy or regrets that one did not have the patient from the start. That is through such reports as will leave the successor in charge in no doubt about what had happened under the predecessor. This information should include not only a record of examinations but also especially the actions and reactions of the patient and family.

The function of the hospital reaches far beyond its walls, and within the walls the ground can be laid to a worthy socializing of medicine. All medical work entails both individual and socialized service. The hospital is the center in which the problem of responsibility concerning disease comes to its fullest test: the right to be sick and also the real conscience of health; the rights and obligations of the patient, of the physician, of the community, and of the family in matters of illness and all its responsibilities.

With a more and more obligatory expectation of necropsies and with the verified digests of good records, the profession and the public alike can acquire a sense of security and of dependability of information as to the nature of human illness that may in the course of time give a more acceptable and useful understanding of disease in our population than is the case today. We also may hope that a most beneficial practical and cultural body of conceptions will come to the public with regard to what "psychology" is. It is likely that even in the schools up to the university and in professional training a more healthy and sound conception of the human individual and psychology will arise, an objective ergasiology or behavior study, one respecting all the inner life of man as well as what comes to obvious expression in action and performance.

Pathology need not be a study only of bankruptcies, but if bankruptcies occur let them be studied to the benefit of sound economics and in frankly experimental biologic terms. Life can then strive more and more toward a working together of human beings of all grades and capacities in the direction of a democracy of fair deal and a system of mutual respect and relations in keeping with one's capacities, free of coercive relations.

3. Occupational Therapy; Wise and Unwise, by *Robert B. McGraw, M.D., and Agnes Conrad, M.D.**

THE modern psychiatric hospital gives occupational therapy a large place in the programs of the majority of its patients. In larger communities, such treatment is available for ambulatory cases and for private patients confined to their homes.

Psychiatrists who would scrupulously individualize a drug prescription, or even an order for hydrotherapy, too often think vaguely when prescribing occupational therapy. The conspicuous ability of many pioneer occupational therapists has tempted psychiatrists to leave to their discretion the entire direction of policy, not formulating even to themselves what should be accomplished and why, much less what is contra-indicated for a given case. In the rest-cure era of the treatment of neuroses, the portion of the day not devoted to care

* Adapted from *Mod. Hosp.* 48:77-80, Jan. 1937.

of the body or complete lethargy was filled with pleasantly monotonous activity of a mildly esthetic sort, as far removed as possible from the conflicts of life. However, in recent years there have been many reports of help by crude physical labor among simple people after the confusion of military or other conflicts.

Back of the need for occupation in the interval between grave strain or illness and the resumption of habitual routine, the psychiatrist recognizes in each case some combination of classical emotional difficulties. We usually find long physical illness complicated by dependence, self-centeredness, anxiety, or depression. The many individuals who regress to childish overdependence during the helplessness of illness require encouragement to do for and by themselves, to take pride and satisfaction in reporting progress in self-reliance. Those with strong narcissistic tendencies who withdraw from outside interests during excessive concern over the body need emphasis on the usefulness of what they are contributing to another individual or to a social group. A diabetic boy, recently recovered from a praecox episode, kept well during long weeks of hospitalization by making a victrola cabinet for the ward. For the cyclic personality, overcome by a loss of feeling of value of himself and of human endeavor, the tasks set must get results before he is aware of being urged or of making any effort. Over-urging and over-praise make him recoil. Understatement will leave his own perception to make the first timid venture into satisfaction in achievement.

The most baffling neurotics encountered by the occupational therapist are those with invalid reactions which serve as a refuge from dreaded demands of life. Unless the threat can be removed, the impetus required is a powerful positive or negative transference, be it to physician, nurse, or occupational aid. In picking the worker for such a case, contagious courage is the first essential, courage even to make the patient angry provided humor is retained and that mellowed by a sincere appreciation of the personality which is to be kept from going to waste.

The neurasthenic's conflict is more deeply unconscious than that of the hypochondriac. He cannot be expected so readily to take up his bed and walk. As with the depressed patient, urging against resistance is bad, but here praise is helpful and hard to overdo, often arousing that feeling of potency, the lack of which is the problem of the neurosis.

Work given the hysteric must bring him a feeling of identification with those in charge or praise in large doses. Ingenious novelties and trinkets about which visitors will exclaim may be the first step in the transition from attention-getting by infantile demands to that by real accomplishments. Then the interest is graduated from such trifles step by step to social and economic adequacy.

Whether anxiety will subside with such accustomed activity as needlework for a housewife who has done too much of it, or with the unusual thing, cannot be predicted without discussion with each patient and actual observation. A hand on the patient's arm may detect muscular tension not visible on the face. In effort syndrome without elevation of basal metabolic rate, one pushes activity in spite of tachycardia, giving much reassurance and promising progressive improvement with persistence. In the anxiety of hyperthyroid pa-

tients, tachycardia as well as muscular tension and sense of fatigue has to be watched, but restlessness may often be quieted by properly selected handwork preoperatively as well as postoperatively.

To summarize: In handling neuroses we can utilize occupational therapy as an aid in overcoming the tendency to avoid responsibility, in increasing the feeling of potency, in directing into more adequate channels the desire for approval characteristic of the hysteric, and in allaying the restlessness of anxiety states.

Manic patients and agitated depressions persuaded to work quietly by the tactful aid will tell you afterward that they began to feel more normal when normally occupied. The warning cannot be too often stressed that suicidal attempts come not at the period of greatest inertia but just at the time when starting into or out of a depression, so that many a patient just beginning to take an interest in occupational therapy may also be interested in using dangerous tools with great cunning and menace to himself. The same caution about tools is necessary when dealing with paranoid patients, but those institutions in which paranoids create a minimum of disturbance and are most contented find congenial occupation rather promptly for each individual, with a maximum of initiative in the circumscribed, usually solitary activity, useful if feasible, pseudo-important at least. The drive of these people if furnished an outlet is less violent, but the physician should watch for increase in tension even in those long permitted to use dangerous tools.

The family of such a patient who is allowed to remain in the home should be instructed to report to the physician any increase in tenseness of manner or violence of language and, in the intervals between his being seen by a doctor, to keep dangerous tools from him. A review of most cases discloses a story of two or three days of mounting tension before the outbreak which ended in tragedy. In all psychotic patients, erotic stimulation with resulting cumulative excitement, increase of anxiety, confusion, negativism, or depression should be looked for by the psychiatrist himself as well as by the occupational aids while patients are actually at work. The occupation and care of epileptics are too specialized and complex to deal with here.

With the schizophrenic, approval and a relief of the sense of guilt are valuable as with hysterics but the difficulty is deeper. Doctor Conrad was given the problem of the violent, so-called "deteriorated" patients at St. Elizabeth's Hospital in 1927 and 1928. It was obvious that these people would be better physiologically if they got more exercise. She started with balls, large and small, and with a victrola. It was noticeable that those who sat day after day in a foetal position would watch the large, brightly colored balls when they were thrown by others, which was a step in advance for them in attention. Those in a little better contact would catch a large ball but merely throw it on the ground. Throwing it back to the doctor or aid came long before throwing it to another patient.

A middle-aged woman who wore her hair in two tight, small pigtails had for several years been cooperative with employees but antisocial otherwise. She astonished us one day by playing catch with a handball with the other patients for an hour, was pleased with her skill and chatted about it with the patients and employees. In a few months she was in

charge of setting the tables for meals with other patients assisting her. This woman did her hair as she had at eight or so, took no interest in the bright balls meant for younger children, but her interest was caught by the type of ball a girl of eight would have preferred.

A roughly true but nevertheless helpful concept is that we catch the patient's interest at the emotional age level at which we find him living. Rag dolls were made for the Christmas sale. Some of our women in the disturbed ward could do nothing more skilled than fluff out cotton to stuff them, but these assured me with evident pride and pleasure that they were making dolls. One very assaultive woman, whom Doctor Conrad had formerly approached only with two nurses, showed her the shirts she had made for boy dolls, button holes and all. She took no interest in the girl dolls but walked with the doctor to the dayroom table to admire the finished products.

The problem in the acute phase of schizophrenia is not so much that of catching the attention as of holding it. The aid who supervised the weaving of rugs in this same institution took great interest in suiting the complexity of pattern on the loom to the degree of confusion of the patient, and showed remarkable skill in the art of recalling each, just often enough, from fantasy to work, never to get a negative reaction. We cannot be sure whether novelty or old habits should be depended on here, as was discussed above under the anxieties. One acute schizophrenic will be confused by unaccustomed procedures, another will block when old habits call up old conflicts. Not infrequently a paranoid praecox woman will want to do carpentry or other work she considers a man's work.

On the whole, the gratification of a patient's expressed wishes to attempt any specific work is worth trying. The patient may be permitted by some to work out unconscious conflicts with symbolic objects, as child analysis uses toys, but this is truly analysis and requires all the safeguards of that technique. The major aim except in the exceptional case must, Doctor Conrad believes, be the progressive return of the individual to satisfaction and self-confidence in participation in normal living, and it is the responsibility of the physician to see that the procedure is adapted to his individual problem.

The problems are quite different in a dispensary. Occupational therapy bridges certain gaps which do not exist in hospital cases. Hospital cases are always available. Dispensary cases are here today and gone tomorrow. In dispensary practice it is particularly difficult to predict how the patient will need to be inveigled into the shop. We use this term inveigled advisedly. It is even more difficult when a fee is asked. Physicians whose practice is entirely in state service or in an absolutely free dispensary do not understand this, and occupational therapists who are attempting to do private practice are often exceedingly unaware of the difficulties in connection with prescribing occupational therapy at so much per hour.

Many clinic patients feel they should be paid for working and it is not possible to give several hours of talk—properly graded as to intellectual and emotional level—to the patient and to all his relatives and friends. Sometimes one has to overcome the decided reaction that basketry and similar work are only for the feeble-minded. Some patients who are felt to be most in need of occupational therapy are hardest to interest. We have been rarely able to interest the severer compensation reactions or the so-called traumatic neurotics. In

these compensation cases it would seem that occupational therapy might be utilized to prevent the development of such reactions, if used tactfully, when the individual is first hospitalized or first confined to bed. If not used early, the neurosis is soon frozen.¹

It is perhaps not too much to postulate that a greater use of occupational therapy in a general hospital and in general practice would prevent the development of these traumatic and compensation reactions and the formation and aggravation of invalid reactions. This development has probably been much set back by the present economic situation, though the development of individual craftsmanship has probably been advanced. Occupational therapy is easily introduced and the occupational therapy spirit which pervades a whole institution and which is not too much regimented is to be encouraged. It is distinctly beneficial to patients who are started in occupational therapy on the ward to have that work carried on later in the out-patient department.

We should like here to mention a movement which we believe was originated in the Babies' Hospital, New York City, by Geraldine McAlpin. While it is not occupational therapy, it is allied to what is best in the spirit of occupational therapy. Here teachers trained in nursery school technique conduct individual work with bed patients. For semi-ambulatory patients there is a schoolroom with these trained workers in charge and with apparatus, games, and toys. There is also a teacher for children of primary school age whose stay in the hospital is long enough to make a continuation of their school work advisable. The regular school work idea is not new, especially in chronic hospitals, but the nursery school is. It is definitely felt that this agency cures, sometimes, as well as prevents a great many behavior problems related to illness and invalidism. It can be and is used to observe children who have more or less primary behavior problems. This in itself is sometimes valuable and prevents discontinuity of approach. We err at times in a too purely educational or psychiatric attitude.

We should emphasize here that we are talking particularly about a general hospital and out-patient department which has a psychiatric department and which has on the wards something more than a consultation service in psychiatry. We should like to emphasize also our belief that psychiatry has something of value to give to a general hospital and to a general out-patient department, provided it is not too jealous of its rights, too narrow in its scope, or too cumbersome in its technique, and provided also that it is willing to learn as well as to teach and to treat.

The shop for ambulatory patients serves several useful purposes. It helps in diagnosis by offering facilities for making special and trained observations, provided the therapist is trained and will report or record data accurately (not formulate, but report and record). The patient is not on his guard or dressed up for inspection as he is in the psychiatrist's office. Even the fact that he says he has no time to come may be important. If we had no shop we certainly could not ask him to come. The shop helps physicians who come to the hospital infrequently, perhaps once a week, by having the patient under some sort of care

¹ The article by F. W. Dershimer, The prevention of traumatic neurosis, *J. Indus. Hyg.* 16:40, Jan. 1934, has value in this regard.

and supervision. At times it has prevented unwise, unnecessary, or precipitate hospitalization of the patient for this work and observation. We may even say that it appears sometimes to prevent the development of a psychosis.

Occupational therapy is in both mental and general hospital wards an aid to nursing; this is also true in an out-patient department, but here the patient's relatives derive the relief and benefit directly. They are not tormented by the patient.

Workers for out-patient shops should be selected on a basis of versatility and personality rather than extra skill in any craft. When the patient reaches the point where he needs advanced instruction he can go elsewhere, for he will probably be well enough by that time. The occupational therapist should not be primarily a virtuoso.

A most delicate and treacherous part of the topic is prescribing the work. We think that it is rarely advisable for the physician alone to do this, and there are dangers in leaving it all to the therapist, and we know from experience that written communications back and forth are time-taking and unsatisfactory; nevertheless, there should be some sort of joint action. This offers greater difficulty in out-patient work than with a stable population but is none the less important. We cannot have patients monopolizing the facilities of the shop unless there is a good reason.

It is inevitable that in any group treatment various persons compete for the credit of the cure and for the loyalty of the patient. We hear from nurses, from recreational aids, and from occupational therapist: "If I had more chance, I'm sure I could have accomplished so much." Sometimes this is pure rationalization. Occasionally it is valid and might well be heeded at the risk of upsetting routine a bit. The danger of presenting too simple projects to the highly intelligent, cultured, and gifted patient should be borne in mind. This takes discrimination and also an acquaintance with the background and personality of the patient, and should be available in some adequate form for the therapist in records.

This is an age of specialization. Occupational therapy is a specialty, and as such must bear the criticism as well as the praise due it. Some say that society, industry, and medicine have all been overspecialized, and it is therefore somewhat of a paradox that the cry of "back to the patient" has been raised in the past decade, and that in opposition to the overspecialization there is this slogan "Treat the whole patient, not just his disease." In other words, treat him not just as a case of typhoid fever, pneumonia, or involutional melancholia but as a sick person. Occupational therapy is mightily involved here.

And there is a broader movement, which while not as well developed seems nevertheless to be powerful. This involves occupational therapy even more. It is a movement to improve the use of leisure time. Many people, though essentially willing, have not been trained in respect to their leisure time, and in a period of enforced idleness of illness they chafe, brood, and finally settle down to long, empty, aimless days and are dully satisfied. Occupational therapy can help people to inaugurate a better use of leisure and can be introduced if given at an opportune time. Illness and convalescence offer very opportune times, and even a mental illness, neurosis, psychosis is a convenient time to introduce this principle, which we believe is so important culturally as well as for healing. This will develop interest

in the creative arts and crafts and in craftsmanship, perhaps also in working with others. With the development of the tremendous subdivision of labor in production manufacturing, there has been little in the work itself to interest the workman in the really creative aspects of his work. There has been left him, however, spare time to learn and do creative work.

4. General Hospitals and the Control of Tuberculosis, *by William H. Oatway, Jr., M.D.**

THE general hospital has always been involved in the tuberculosis problem. The relationship has been known for years, but treated very casually. It is now more seriously regarded since more data on epidemiology are available. We realize that all of the admitted patients are concerned, since a certain number have an unrecognized disease and the remainder may be unwittingly exposed. The entire attendant staff is also repeatedly in contact, and too often some members acquire the disease.

It is obvious, therefore, that hospital boards and managers must take attitudes on a number of vital questions, and must plan routines to recognize and care for various situations. The old argument concerning the admission of known cases of tuberculosis must be finally settled: tuberculous patients must be admitted and cared for when necessary, using efficient infectious disease precautions. Other admitted patients must be surveyed for tuberculous pulmonary disease, using methods for a quick recognition and a careful custody of the discovered cases. The staff and employees must be repeatedly surveyed for infection and disease. In short, there must be a complete knowledge and control of all tuberculous disease within the hospital walls at all times.

There is no doubt that these things are necessary or can be done. Agitation by medical, specialist, and public health groups, begun in 1908, has continued through 1916, 1920, 1926, 1931, and 1939. Additional knowledge has increased the urgency and reasons for action, until now a surge of demand is evident. The actual application of methods has been slow and partial, with few hospitals in Canada or the United States having a complete plan or routine in effect.

The theory and practice of tuberculosis control can best be discussed in regard to the groups and methods concerned.

1. *Tuberculosis among Routinely Admitted Patients.* Every clinician has had the experience of finding cases of infectious tuberculosis among the patients in a general hospital. They are often cases with another cause for concentrated attention, often cases needing close nursing care and repeated admissions. At times they have signs and symptoms of lung disease; often none at all. Large hospitals, or those with teaching facilities and repeated complete examinations, are fortunate but no exception.

Examination of routinely admitted cases (in Wisconsin, Michigan, Minnesota, and New York hospitals) has demonstrated 2 to 7.5 per cent of the patients to have otherwise

* Adapted from *Canadian Hospital* 16:15-17, July 1939.

unrecognized tuberculous disease, at least one per cent of which is of immediate clinical importance. A failure to examine for such lesions deprives the patient of a diagnosis, the physician of the knowledge, society of resulting protection, and exposes other patients and the staff to some degree of contact. The amount of danger which most of these cases present is not maximal, but definitely exists. The front steps of a large midwestern hospital have recently been examined daily for 18 months, and sputum specimens found on all occasions. Four per cent of these specimens contained tubercle bacilli.

The second piece of evidence is indirect, and is obtained by noting the incidence of infection in hospital contact groups.

2. *Tuberculosis among Attendant Staff Groups.* The members of the hospital personnel who may be exposed to infection from patients will depend upon the size and type of the hospital. The list can include nurses (both student and graduate); the medical staff (visiting members, residents, interns, and medical students); the attendants (orderlies, cleaning women, janitors, laundry and kitchen workers); and technicians (x-ray, dental, laboratory, and physiotherapy). The intimacy of contact will vary with the type of patient and type of work. Many surveys have been made during the past ten years of the incidence of infection and disease among these groups. They uniformly show one thing, an increased incidence of both infection and disease after various periods of contact. Tuberculin tests on students of nursing and medicine change from the usual 25-40 per cent of positive reactors to 60-100 per cent. Disease demonstrable by x-ray develops in 2 to 15 per cent. Some studies have shown that the incidence is higher when the individuals serve on a tuberculosis ward. More recent work has shown that the use of complete infectious disease precautions has eliminated such an increase.

It would be ideal to avoid all infection but, since this is not yet possible, the frequency with which tuberculous disease develops in positive and negative tuberculin reactors has been important. Although controversial, it is probable that less clinical disease develops in those who have had a nonprogressive previous infection, just as in vaccinated laboratory animals.

Means by which an unsuspected focus of infection can be identified are naturally of great interest.

3. *Modern versus Traditional Case-Finding Methods.* The diagnosis of tuberculosis in the past has often been made when a symptomatic advanced and untreatable case finally went to a physician for examination. The personal and public health hazard in this system is obvious. More recently the tendency has been to examine single or groups of apparently healthy individuals by the use of simple, precise, accurate tests. This procedure has regularly turned up several cases per hundred, the number depending upon the age, sex, color, part of the country, economic status, and other factors. The lesions are often inactive, small in extent, and noninfectious. They have produced less exposure and are less difficult to treat.

The accepted methods consist of the familiar two-dose intradermal tuberculin test, and an x-ray of the positive reactors. In some surveys where speed and convenience are more

important than expense and data on infection, only an x-ray method has been used. The best x-ray method is usually a single film. When accuracy is less important than expense, a paper x-ray can be made; when cost is more important than a permanent record and an expert is available, the fluoroscope may be used.

These screening methods were first applied to school children—a less productive field than one in which the incidence is higher. It has gradually been realized that to really reduce the still shocking incidence of morbidity and mortality, adult groups must be surveyed. A general hospital fulfills the indications from every aspect.

The infrequent application of such a routine has been mentioned. Some few hospitals survey their personnel; an even smaller number makes a partial survey of the patients.

4. *The Admission of Known Tuberculous Patients.* In spite of the long-continued urging that cases of tuberculosis be knowingly admitted to general hospitals and effectively isolated, it is not commonly done. One midwestern state has had a thousand known deaths a year from the disease. Twenty per cent of these deaths occurred in general hospitals. Three quarters of the general hospitals reported such deaths. Yet only one-third of the hospitals stated that they admitted cases of the disease. The use of precautions was even more highly limited.

The general reasons why hospitals should admit tuberculous patients are humanitarian, educational, public health, and economic. Specific reasons which have been given are at times controversial, but add up to a great weight. Beds should be available for cases in emergency and for those in extremis and unmovable. Recently diagnosed cases should be admitted so that rest and observation may begin at once and the patient may be immediately removed from contacts. Differential diagnosis may be easily made in a hospital. The patient should have access to the general surgery, special therapy, or nontuberculous medical care of a hospital. Students of nursing and medicine should be instructed in the diagnosis and care of tuberculous patients in a hospital. Some of the vacant beds in general hospitals could be well utilized by patients who are waiting admission to crowded sanatoria. It would help to increase the bed-per-death ratio to a more satisfactory balance. Admission of cases of tuberculosis can be done with financial profit, as has been proven by numerous trials.

Few of these reasons can be disputed. The days are past when one can justify the exclusion of tuberculosis while pneumonia, the exanthemata, and other contagious diseases are admitted, especially since effective precautions are possible.

5. *The Use of Protective Methods in a Hospital.* Infectious disease precautions can be applied effectively and simply. The objectives should be to prevent the spread of the tubercle bacilli and to destroy them whenever they may be spread. Every known or suspected tuberculous patient should be located out of contact with the person or routine of nontuberculous patients, and the precautionary care should be such as to prevent transfer, by any means, of bacilli from his respiratory tract to any other in immediate or remote association. The specific methods will vary with the size and construction of the hospital. The precau-

tions should immobilize the bacilli as close to their source as possible, and should be so devised as not to depend upon the human factor (of patient or attendant). They will only be as effective as their execution allows them to be.

The beds should be set apart in rooms, units, or separate wards. The patient should be repeatedly instructed in care of the cough, sputum, hands, etc. Personal articles should not be transferred. Laundry should receive special handling and cleansing. Care of the bed and its environment should be by aseptic and antiseptic routine. Kitchen service may be based upon issue of uncontaminated trays from a clean kitchen and the treatment of all objects which are returned as contaminated. A routine can apply to the service room, charts, chairs and carts, technical service, etc. Protection of personnel and visitors may be accomplished by covering the clothes and lower part of the face, and by ablution of hands and utensils.

6. *The Public Reaction to a Hospital Program.* The attitude of the general public is usually tolerant and inert, in regard to both hazard and correction. Organized groups are active, however, and more progressive. Examinations are usually accepted and even demanded, provided the cost is low. Precautions are rarely resented if they are routine and accompanied by explanations. A public that now swallows the word "syphilis" and allows serological studies to be made will not gag at simple tests for tuberculosis. Judicious publicity can be a great help in obtaining cooperation.

Conclusions. The general hospital contains a serious tuberculosis problem which can be solved by application of a corrective program.

The goal of anti-tuberculosis efforts should be the perfection of methods which will arrange for hospital care of the tuberculous sick when necessary, will invariably and promptly recognize tuberculous disease in patients at the time of admission, establish the status of the staff and employees in regard to tuberculosis, provide for the training of members of the staff, reduce the occupational hazard of all workers, and decrease the liability of the hospital. The program requires a readiness on the part of the hospital manager or board, a relatively simple routine for diagnosis and precaution, and an intelligent and constant direction. The results can be immeasurable from individual and public health standpoints.

5. Strict Aseptic Technique Is Required in the Contagious Unit, by F. G. Carter, M.D.*

IN the last few years much has been said about the hospitalization of contagious diseases in the general hospital. Today this practice is being carried out in a number of institutions with satisfactory results. In proper hands it is theoretically and practically sound and presents no great difficulties if the details of operation are carefully thought out and planned in advance. However, the hospital executive who undertakes such a project must know

* Adapted from *Mod. Hosp.* 41:67-69, Sept. 1933.

beyond any doubt what he is about, which means that he or someone in his organization must thoroughly understand all the details involved in the application of the principles of asepsis and must be willing to shoulder the responsibilities attendant upon strict enforcement of rules of technique. We can't just go through the motions of practicing medical asepsis. It must be more than a gesture. It must be approached with every ounce of thought and concentration that can be summoned to the task. The director or supervisor must strive continuously for a hundred per cent observation of the principles involved on the part of all concerned. Under any other conditions it is better for the general hospital to exclude contagious diseases.

The hospital that teaches its personnel to practice an unfaltering aseptic technique teaches a mode of living that will yield big dividends in health throughout the lives of these individuals. They learn that this technique has a practical application to ordinary living conditions. This training is in large part the answer to the question so often asked, "Why do not doctors and nurses more frequently acquire the diseases of the patients whom they treat?" No part of the educational program of doctors, nurses, and other hospital attachés is more important.

The greatest obstacle to the practice of medical asepsis is human indifference to underlying principles. We all know that these may be violated without ill effect in many instances, but we never know which violation may result in a cross infection. Because of this knowledge too many people are willing to gamble on the statistical chance that their errors will produce no harmful results. In the field of surgery no one would think of passing from one operative case to another without proper preparation between cases. Such an offense against proprieties in an isolation unit may have consequences which are just as serious, perhaps even more so, but the fact remains that rules of medical asepsis are difficult to enforce. Constant supervisory vigilance is required.

Contagious diseases are transmitted commonly by direct or indirect contact. Air transmission is considered of little practical importance. This must not, however, be confused with droplet infection in which patients suffering from contagious disease transmit the disease by talking, coughing, or sneezing directly into the faces of companions or attendants. Certain diseases are transmitted by inoculation. Examples of these are malaria and probably erysipelas. The causative organisms or viruses of contagious diseases usually enter the body through the nose or mouth, being conveyed to these portals by the hands or by direct contact, as in kissing. On the basis of our knowledge of the methods of transmission of these diseases we have over a period of years elaborated a method of caring for them safely by employing well-defined principles of asepsis.

Medical asepsis is designed to break at its source the chain of events that leads to the dissemination of disease. Through its use it is possible to confine a disease to a physically separate unit by interrupting contacts, either direct or indirect, with this unit. One or more patients suffering from the same but no other contagious disease may be cared for in this area at the same time. Under proper precautions more than one unit may be designated in the same ward or room.

The necessary technique involved in applying the principles of medical asepsis may be carried out anywhere in the hospital, but a quiet section of suitable size, in a part which can be more or less segregated and which lends itself readily to isolation purposes, will serve best. Single rooms are best adapted to the work because they simplify the technique and give greater flexibility in handling different kinds of cases. If there are individual bathrooms so much the better, because these may also serve as individual utility rooms and more complete care may be given without leaving the unit. Running hot and cold water in each unit is highly desirable. Storage space for such clothes and utensils as may be needed in the care of the patient is a great convenience. Scrubbing and gowning facilities in the corridor or in an alcove just outside the patient's room give a sense of security that is not available when these activities must be carried out inside the room. Children cannot always be relied upon to observe carefully the restrictions imposed upon them in regard to "untouchables" and the majority of this class of patients are children, hence the difficulty when scrubbing and gowning facilities are placed inside the room.

When single rooms are not available, the cubicle may be used to advantage. It should be of sufficient size to permit attendants to minister to the patients without crowding. It should be so constructed that it offers a minimum of interference with cleaning activities and ventilation. If partitions are built partly of glass, supervision is easier and juvenile patients particularly will be more contented because they will be able to see and talk to their fellow patients. If neither single rooms nor cubicles are obtainable, patients may be cared for in open wards. In this event, a minimum of five feet of space must be allowed between beds and careful attention must be given to the proper grouping of patients on the basis of susceptibility to the various diseases which are being cared for in the ward. The task of maintaining a strict aseptic relationship between patients is much more difficult in open wards than it is in rooms or cubicles because the human element is not sufficiently trustworthy. Obviously the closer we approach ideal accommodations the better our results will be, other conditions remaining equal.

In a contagious section it is well to have the doors and corridors wide enough to facilitate easy movement of patients from one room to another without removing them from their beds. As a further aid to this interchange of patients the beds should be equipped with a good grade of caster so that they may be rolled easily. The rooms or wards should be furnished in the simplest possible fashion, everything in them, including the walls, being of a character that will permit frequent disinfection by sterilization or scrubbing with soap and water without undue deterioration. A minimum of storage space for the things that the patient brings with him is necessary for the reason that these things are restricted to the lowest possible minimum. In other aspects the accommodations for contagious diseases need differ little from those designed for the accommodations of general hospital patients.

When the organization of a contagious division in a general hospital is contemplated, one of the first tasks is to employ a competent individual to plan the general and detailed operation of the section. The technique varies in different hospitals according to the physical characteristics and equipment of each institution. All properly managed contagious

hospitals have their own manuals of technique in printed or mimeographed form and these are usually available for the asking. A number of them should be obtained and used as examples in building up the technique for a new unit. Such manuals should be carefully reviewed and revised at frequent intervals, thus ensuring constant improvement. They convey to the reader and student definitions and descriptions of aseptic technique and of what it is intended to accomplish through its use. They also describe all procedures in detail and are the basis for teaching programs and demonstrations. It is the duty of the supervisor or director who is engaged to visualize and plan the work and then make up the manual of procedures and regulations. After this it is his duty to enforce the principles of asepsis with an iron hand.

The area set aside for the housing of contagious diseases is divided into "contaminated" and "clean" areas. These terms have reference to the presence or absence of the pathogenic materials of contagious diseases. All floors and all areas and things that have been in direct or indirect contact with patients suffering from contagious diseases are contaminated. Unless otherwise designated, this term applies to everything in a room or ward where patients are housed. Where patients are restricted to their respective units, as they should be, all other areas and things may be considered "clean" except floors and the things that are carried from the units, such as personal effects of patients, laundry, dishes, garbage, utensils, and similar items.

Doctors, nurses, and attendants may enter contaminated areas without preparation, provided they touch nothing in the contaminated section except the floor with the soles of the shoes. If they are to come in close contact with the patient or with anything in the contaminated area, they must prepare themselves in such manner that they will not carry disease-producing organisms to or from the patient or his unit.

The commonly accepted method of achieving this purpose is as follows: A cap covering the hair and a mask covering the nose and mouth are put on; the hands are then thoroughly scrubbed, including any portion of the forearm which will not be covered by the gown; a surgical gown is then donned to cover the clothing. At the conclusion of the visit to the patient, cap, mask, and gown are removed and the hands are thoroughly scrubbed. The same gown may be used over and over again for the same unit, provided it is folded carefully with the clean side out and hung in a clean area set aside for that purpose, or folded with the contaminated side out and hung in its place in the contaminated area. It goes without saying that when this is done the hands must be scrubbed before removal of the gown so that the latter act may be accomplished without contamination of either hands or gown. A poor mask technique is worse than none. The mask should never be touched with contaminated hands. If the mask slips down from its intended place, it should be discarded because the inner surface of the mask has thus become contaminated.

The details of serving meals, administering medicines and biologicals, admitting and discharging patients, keeping records, making beds, housekeeping—in short, all activities having to do with proper handling of patients with contagious diseases—must be made

matters of special concern and study in each institution and incorporated in the manual of regulations and procedures of the institution.

All of the accepted forms of immunization against contagious diseases should be used for the benefit of hospital attendants of all grades. Toxin-antitoxin, vaccination against smallpox, and typhoid inoculation have values in the prevention of these diseases which are too well known to be overlooked when the protection of the personnel is considered. Where student nurses, interns, and others are rotating through the contagious service, they should receive the benefits of these prophylactic measures sufficiently early so that immunity will have been acquired when the time comes for them to be assigned to the hospital's contagious disease section.

Visitors to patients ill with contagious diseases represent a somewhat different problem from that presented by visitors in a general hospital. To begin with, visiting is much more restricted, which means that the giving out of condition reports to relatives and friends and in general the maintenance of the patients' contacts with the outside world place a much heavier burden on the attending personnel and particularly on the telephone operators. This must be kept in mind in making up duty assignments. Relatives may be permitted to visit from the corridors at intervals or even regularly without serious embarrassment to the service. If they are permitted in the rooms or wards, they must observe the details of technique and a considerable amount of nursing time is used in giving instructions to visitors and watching them for breaks in technique.

The cost of operating a contagious disease unit is somewhat higher than that of operating a unit of similar size and comparable activity in the general hospital. The ratio of ward personnel to patients is increased, considerable time being consumed by the additional details involved in nursing and medical procedures. Greater quantities of linen are necessitated by the technique involved. General maintenance work is increased by the harder use to which the unit is subjected. Training of personnel is a considerable item in operating a contagious disease unit.

The attention that is being given to the question of caring for contagious diseases in the general hospital is further evidence of the fact that hospitals are never static. They are constantly growing and changing in response to the medical conceptions of the changing needs of the sick. I cannot suppress the feeling that the hospital of the future will find a wider field for the application of the principles of asepsis than that which exists today. Perhaps a combination of strict surgical asepsis with thoroughly reliable medical asepsis is the answer to the problem of maternal mortality that confronts the hospital and medical professions in dealing with puerperal women. Already tuberculosis sanatoriums are exhibiting a marked tendency in the direction of employing a strict aseptic technique in handling their patients. The general hospital which is alive to these changes and possibilities and which equips itself to receive a wider variety of patients through the adoption of technique that will enable it safely to care for them, will find an increasing demand for beds in the institution.

6. Physical Therapy Department in Small, Medium, and Large General Hospitals,
*by John S. Coulter, M.D.**

A RECENT visit to a hospital physical therapy department disclosed that the equipment of this department consisted of a fever cabinet and a short-wave diathermy machine for the administration of hyperpyrexia. In the cabinet a patient was receiving her twentieth treatment for chronic arthritis, and this was the only physical therapy used. Her temperature was 105.3° F. and the temperature was being taken at fifteen-minute intervals by an ordinary rectal thermometer.

It was clearly evident that this hospital had been sold some equipment and was determined to use it. There were five things wrong with this picture. First: Hyperpyrexia by physical agents has a limited place in the treatment of chronic arthritis, but it is questionable whether as many as twenty treatments should be given. Second: Her temperature was 105.3° F. It has been proved that the maximum peripheral circulatory increase is secured between 103 and 104° F. This increase of peripheral circulation, as far as we know, is the cause of the improvement with hyperpyrexia for chronic infectious arthritis. Therefore, the temperature was unnecessarily high. Third: This hyperpyrexia was the only physical agent used in this case. She should have had instruction in the home use of local heat, massage, and exercise. Fourth: The treatment was administered by a nurse untrained in physical therapy. Fifth: The method of taking the rectal temperature by an ordinary rectal thermometer during this fever therapy with the temperature at 105° F. was dangerous, because the temperature may rise several degrees within five minutes. In one hospital where this same method was used there were two deaths from heat stroke. In these cases the rectal temperature rose to a dangerous point between the readings with the ordinary rectal thermometer. The only safe method for taking temperature over 103° F. when using hyperpyrexia by physical agents is with an electric thermometer so that the rectal temperature can be constantly under observation by the nurse.

This condition could not have occurred if the American College of Surgeons hospital standardization requirements for a physical therapy department had been followed. The Manual of Hospital Standardization states:

The director of the department of physical therapy should be a physician who has had special training in this branch of work, as well as extensive clinical experience. This is essential, not only for the safety of the patient, but the carrying out of scientific treatment. . . .

The department should have the necessary corps of trained technical staff. Physical therapy technicians or aids require a basic knowledge of anatomy and physiology in order to understand the application and effect of the various types of treatment. Well trained technicians are invaluable, not only in carrying out treatment ordered, but in observing and reporting symptoms and reactions to treatment. They should always be under the supervision of a medical director. . . .

* Adapted from *Hospitals* 11:54-56, Dec. 1937.

. . . It is important that the medical director have full authority in regard to treatment, inasmuch as physical therapy has become an intricate specialty in the last few years, and all doctors practicing medicine today are not sufficiently familiar with the various forms of therapy to assume the entire responsibility of prescribing the most desirable type of treatment.

It is also stated in this manual:

The time has come when trustees must have the moral courage to declare without reservation that the hospital be kept for the truly scientific and thoroughly trained profession of medicine, rather than allowing it to be a place where humanity is at the mercy of the unlearned and the unskilled.

Every hospital must be so operated as to assure the public that they can obtain adequate, skillful, and responsible medical care. Numerous court decisions throughout the United States hold trustees responsible for the acts of their agents or employees, including all doctors or others permitted to care for patients in the institution. Supreme courts have ruled that: "Whenever a hospital fails to exercise due and responsible care in the selecting of its agents, physicians, or others, it is liable."

It is evident from the aforementioned hospitals in which hyperpyrexia was improperly administered that these are places where "humanity is at the mercy of the unlearned and unskilled." A standard has been set for the guidance of the trustees or governing body of a hospital, and where there is gross neglect of this standard it would seem that they are morally and legally liable.

Is it possible to adhere to the stated personnel requirements? It is, even in a small hospital. The part-time services of a physician for a medical director can be secured by several methods. Arrangements may be made with a physician who is supervising one or more hospital physical therapy departments in the same town or city or perhaps with a physician in a nearby town who will make regular visits to the hospital. Trained physical therapy technicians are essential to a hospital physical therapy department. These technicians should be graduates of a recognized school for physical therapy technicians. These schools are inspected by the Council on Medical Education of the American Medical Association, and an approved list of schools is published every year. There is a Registry for Physical Therapy Technicians modeled after the registries for laboratory, x-ray, and occupational therapy technicians. It is recommended that technicians be registered.

Can a small hospital afford to employ a registered physical therapy technician? It should do so or else not have a physical therapy department. It may take some ingenuity to arrange for this technician but usually with some thought and cooperation with the staff the part-time services of a trained technician can be secured. Some orthopedic surgeons employ part-time physical therapy technicians in their offices; visiting nurses and social service agencies for the care of crippled children may do likewise. These physicians or organizations may be persuaded to share their physical therapy technician with the small hospital. Again there are a limited number of technicians with a combination training in

x-ray or laboratory technique and physical therapy. There is a definite need for technicians with this combination training.

The question of trained personnel for the physical therapy department is now of paramount importance. Formerly it was thought that physical therapy could cause some harm but that no treatment would endanger a patient's life if moderate care was used. Now it must be recognized that with the use of short-wave diathermy and the rapid development of fever therapy a patient's life may be in immediate danger unless the treatment is administered efficiently. The Council on Physical Therapy of the American Medical Association believes that the method of producing hyperpyrexia by physical agents should be used only in hospitals surrounded with the safeguards commonly employed in a major surgical operation and under the direction of skilled physicians, and that the technique and administration of this treatment should be given as much study as a surgeon gives to a specialty or a certain branch of surgery.

Physical therapy is now so well recognized that it is recommended to the American College of Surgeons that their manual of hospital standardization under the section of physical therapy should add the following sentence at the beginning of the section: "An efficient physical therapy service should be available for every approved hospital."

It is also recommended that the following be added to the paragraph on equipment under Physical Therapy: Physical therapy equipment is now well standardized and lists of minimum requirements can be readily furnished. The following is suggested as the minimum equipment:

- 1 treatment table
- 3 electric lamp "bakers" of various sizes
- 1 tank for underwater exercises
- 1 stall bar with shoulder abduction ladder
- 1 shoulder wheel
- 1 stair exercise apparatus
- 1 parallel bars, adjustable height
- 1 posture mirror
- 1 weight and pulley apparatus
- 1 kanavel table for hand, wrist, and forearm exercises
- 1 paraffin bath
- 1 whirlpool bath

This list of equipment is given with the idea expressed by Gaenslen that 90 per cent of physical therapy is the use of such agents as heat, massage, and exercises. With this equipment and proper personnel, most physical therapy departments can be started. The other equipment such as ultra-violet generators and high frequency machines can be purchased later as the need arises and with the profits from the department. When equipment is purchased, it should be carefully selected and only apparatus should be used which has been accepted by the Council on Physical Therapy of the American Medical Association and the American College of Surgeons. It is to be noted that all machines accepted are not equally

efficient. There are certain minimum requirements which must be fulfilled for acceptance but some machines are more efficient than others. These data are published in the *Journal of the American Medical Association* and can be secured from the Secretary of the Council on Physical Therapy.

Dr. Philip Wilson recently stated: "I look to the more general and intelligent use of physical therapy, not by physical therapists but by physicians, as the means of making the next great advance in fracture treatment." Many other experienced students of fractures such as Magnuson, Cotton, Darrach, and Murray have written on the value of physical therapy in fracture treatment. In view of these statements it is believed that in the Manual of Hospital Standardization and under the section on Traumatic Surgery it should be recommended as a part of the Minimum Standard that physical therapy should be available in hospitals treating fractures.

Recently the staff of a small hospital wanted to establish a physical therapy department. The request was refused by the board of trustees of the hospital. They stated that they had started a physical therapy department four years ago and had purchased \$1,000 worth of lamps and electrical apparatus. A nurse without training except by the salesman of the equipment was assigned to run this apparatus and a certain amount of good was accomplished. The doctors of the town then purchased apparatus for their offices, treated their patients in the office, and now for two years the electrical apparatus has stood idle in the hospital. This history indicates that the hospital never had a physical therapy department. There are many salesmen selling electrical equipment, and no salesmen selling heat, massage, and exercise which agents should be used for 90 per cent of the cases in this department. If this hospital had spent the money for a well-trained technician, had a medical director, and used homemade apparatus at the start, this department would have succeeded, because the department would be giving the patient treatments that the physicians could not duplicate in their offices. A hospital physical therapy department with proper personnel can give underwater and other exercises, expert massage, and fever therapy that cannot be given in the average physician's office.

The proper use of a physical therapy department in the treatment of chronic arthritis will illustrate these points. During the acute stage continuous heat with an electric lamp baker in the hospital rooms is used. In the subacute stage where there are painful weight-bearing joints, underwater exercises and hot baths are combined in a Hubbard tank or a whirlpool bath. When the patients are discharged from the hospital, the need for physical therapy as an adjunct in the treatment of these cases is recognized. The benefit that these cases receive in resorts is well known, but that these same results can be attained in a small hospital physical therapy department is often forgotten. Many of these cases may secure the same treatment and results as though they were treated in an expensive resort by direction of the physician and the teaching by the technician of the patient and some member of the family to give heat, massage, and exercise at home. By this method the patient secures two hours of treatment daily at home, is required to report twice weekly for check-up and additions to the treatment program by the physician and technician. The heat at home

is administered by some form of home-devised hydrotherapy or by a simple baker that can be made by the hospital electrician. The object in the local treatment of arthritic joints is to increase the circulation, and if this is the object surely treatment must be given more often than three times a week. If a hospital is equipped with nothing but electrical machines, the patient often receives only one form of treatment and that only three times a week because the patient cannot afford to pay for more treatments.

By this method of cooperation between the physical therapy department and the patient, the patient secures treatment at home that is equal to what he would get at an expensive resort and his cost of medical care is reduced. The hospital is able to control the case for a much longer period and this increases the income of this department. Thus both the patient and the department are benefited.

7. Hospitals' Help Needed in Promoting Child Health Program, *by Ida M. Cannon**

THE reports of the White House Conference on Child Health and Protection place great responsibilities on the medical institutions of the future.

That the hospital must become more articulate in community planning for the health and the protection of children is imperative. The voice especially missed at the Conference was that of the hospital administrator. The hospital is a complexity of many special interests. It cannot speak with real authority unless all its interests are harmonized. These involve the clinician, the nurse, the dietitian, the medical social worker, the occupational therapist, the librarian, as well as the administrator. This complex hospital group must also be integrated with the various public health and social service groups of the community.

The modern hospital at its best is one of the most complex of our modern institutions. While care of the patient is its immediate and primary purpose it is not its sole purpose. The hospital is a mirror that reflects the march of scientific medical practice and is the *sine qua non* of its progress. Within the hospital there is an interweaving of several professions each of which has its own standards of performance and educational ideals. These are constantly changing. The hospital also is a center for contributions to science of the research laboratory. These many and varied interests and responsibilities that are involved in the institutional administration of hospitals are further complicated by the social and community responsibilities that demand recognition and practical expression. Hospital administrators and trustees who appreciate their obligations are carrying a heavy load.

The White House Conference of 1930, beginning as it did with a pledge to the American child, parallels in many ways the large scope of interests that hospitals represent. The present-day specialization, which is strikingly exemplified in the hospital, must work its way out by means of a process that is neither easy nor well understood—that of interweaving the varied contributions so that the patient will not be lost sight of. In order to make a practical approach to this complicated subject, the committee on hospitals of the White

* Adapted from *Mod. Hosp.* 39:75-78, Dec. 1932.

It should be noted that the reference is to the White House Conference held in 1930.—Editors.

House Conference on Child Health and Protection has considered the conference reports from the standpoints of the patient, the personnel, and the hospital's community relations program. For instance, the care of the patient cannot be discussed without consideration of the quality of the personnel and the community that forms the environment from which the patient comes and to which he will return. Let us focus on the patient, in this case the child patient.

There are no accurate data on the number of children under care in hospitals. The report of the committee on hospitals quotes figures from the American Medical Association's report of 1930, and also gives figures compiled from 1400 answers to a questionnaire that was sent to hospitals. Of the 912,000 hospital beds in this country, 71,000 beds are for children. Replies to the questionnaire indicate that 571,219 children were cared for in American hospitals in 1929. The bare fact that over half a million children were admitted to hospitals is evidence that the hospital is of major importance in this subject of child health and protection. No estimate is given of the additional number of children cared for in the various dispensaries throughout the country.

Three of the main points in the Children's Charter drawn up by the conference have a direct bearing on medical institutions and may be rephrased into vital questions. For instance, Point 4 might read: Does every prospective mother who enters a medical institution receive prenatal and postnatal care and such protective measures as will make child-bearing safer? Point 5 might ask: Are medical institutions doing all they can to see that children are receiving the full value of the special treatment needed and are these institutions promoting protective and preventive measures against communicable disease and dental care, and periodic health examinations to safeguard the child's growth and development from birth to adolescence? Point 13 might ask this question: Is every child, blind, deaf, crippled or otherwise physically handicapped, who enters a hospital or dispensary assured of a skillful diagnosis of his handicap, proper care and treatment and training that will make him an asset to society rather than a liability?

The extraordinary reports presented by the committee on growth and development contain material of far-reaching significance to the clinician, the dietitian, the nurse, and the social worker who deal with children. For instance, this committee offers constructive criticism of present methods of weighing and measuring children. The report explains why present standards are unscientific. The committee does not accept fixed and rigid standards for height, weight, and age. It is not so interested to know if a child conforms to a standard that represents an average as it is interested to know whether or not the child realizes to the fullest possible extent his own inborn potentialities. The committee maintains that "no consideration of the child can be complete that does not include a recognition of all parts of his body, his mental development, his emotional life, his family background and heritage." This insistence on individualization prevails throughout the conference report.

The volume on the *Appraisal of the Child*, which deals with both the physical and the mental examination, is an authoritative compilation of thought on this subject. Throughout the reports on growth and development socio-economic factors are recognized

as of major importance in promoting or hindering the child's proper progress. The volumes that deal with the proceedings of the conference should become valuable textbooks for those charged with the care of children. The volume on nutrition is particularly important for dietitians and those associated with food clinics. The committee on growth and development also points out that there is a lack of knowledge and a lack of definite programs for the health protection of children in the adolescent period.

The committee on prenatal and maternal care has taken for its text Point 4 of the charter: "For every child full preparation for his birth, his mother receiving prenatal, natal and postnatal care; and the establishment of such protective measures as will make childbearing safer." Standards for service in maternity hospitals and in prenatal and baby clinics appear in the reports submitted by this committee and its various subcommittees. The shocking figures on maternal deaths in this country, 15,000 annually, higher than in any other country from which data are obtainable, should challenge every physician, nurse, and medical social worker, all of whom are recognized by the committee as essential in service to the prospective mother and her child.

The conference was divided into four sections. Each section studied one of the following main subjects: medical care, public health, education, and the handicapped child. Section 3 on education contains references of significance to organized medicine, especially in the report on education and training of the handicapped child. The staggering figures on the number of handicapped children in this country leave those who think primarily in terms of the individual rather helpless. The report gives the following data on handicapped children: 14,000 totally blind; 50,000 partially blind; 20,000 deaf; 3,000,000 with impaired hearing; 1,000,000 with defective speech; 300,000 crippled; 380,000 tuberculous; 1,000,000 with damaged hearts; 6,000,000 malnourished; 675,000 with behavior problems; 450,000 retarded in mental development in schools. It may be said that these are problems belonging to special educational institutions, but over and over again the statement appears that early discovery, early treatment, and early training are of basic importance in helping these children. Individualization is absolutely essential. Hospitals and clinics are mentioned as the proper places for giving the necessary supplementary medical care to these children.

A hospital caring for the orthopedic cripple should be familiar with what is essential for his education and training. It is not the duty of the hospital to provide this education, but the medical care cannot be isolated from the other needs of these children, and so the necessary supplementary care must be provided through social service. Adequate care for handicapped children is a dream of the future, but nevertheless it is highly important that existing facilities for this work be used to the fullest extent. The task must be performed largely by the hospital's social service department, but social workers cannot assume this responsibility without the cooperation of doctors and hospital administrators.

The committee on hospitals states that reports from 110 hospitals show that 50 per cent of the children under care in 1929 lived more than thirty miles from the hospital. Good roads, a lessening fear of hospitals, and public education on the importance of good medi-

cal care have tended to increase the number of out-patients. The committee on interstate problems of child welfare discusses this problem in Section 4 from the point of view of social policy and financial responsibility.

Section 4 on the handicapped child offers several reports that should be helpful to any community that is considering its duty to the handicapped child. The principles that have been developed for allocation of responsibility for care and for the cost of care are discussed by experts in administration of public and private child welfare activities. Experiences of state, county, city, and local agencies are given and definite reference is made to various parts of the country where adequate programs have already been established—for instance, the care and supervision of the unmarried mother and her child under the Minnesota plan, the scheme for detection of crippled children and payment to hospitals for their care and treatment in Ohio, the New Jersey progressive state program for the crippled. The reports of these agencies indicate that the hospital is considered an important part of their respective programs. In these reports, as in the discussion of the dependent child by another committee, attention is directed to the disadvantage of institutional life for a child.

The report of the committee on convalescent care covered 100 convalescent homes having 6800 beds, in which 22,000 children were cared for in 1929. The experiences of leaders in this field were described. Of the 100 homes, 27 per cent were associated with hospitals.

Convalescence was defined as "that period following an attack of illness during which an individual is unable to return to, what would be for him, a normal routine of life, and during which he does not require the constant thoughtful supervision of a physician; and it implies that he will be able to return to his normal life if relieved of life's burdens for a reasonable period of time." A distinction is made between the convalescent, the chronically sick, and the debilitated child, the report maintaining that for these various groups different types of institutional care should be available. As an economical measure, the report advocates the hospital having a convalescent department to which the patient may be transferred during his convalescent period. The limit of a two-week stay, which is specified in some convalescent homes, is, according to the report, no more logical than would be a two-week limit on the stay of a pneumonia case in a hospital ward.

The assertion that the complex program for child health and protection demands a higher standard of selection and education of personnel dominates the four sections of the conference reports. Better facilities for teaching in hospitals and clinics are recommended. It is not the function of this committee to evaluate or interpret the various recommendations. It does, however, wish to state that if these recommendations are to be taken seriously they must be discussed with those who are responsible for hospital administration. The raising of standards of personnel in the hospital would, of course, raise the standard of the entire institution. But to raise these standards would have a serious bearing on hospital costs.

The question of the midwife, her place in maternity service, and her training and control, were considered by leading obstetrical authorities of the country, and this discussion

forms an interesting section of this group's report. The answers to these questions, the report states, must be in the form of a more wisely distributed hospital service and training opportunities in which hospitals must play an important part.

The report of the committee on nursing, while almost identical with the report of the Committee on Grading of Nursing Schools, places greater emphasis on the education of nurses in matters pertaining to the care of children. A member of our committee asks if the time has not arrived for the American Hospital Association to give support to a program that will provide better nursing service. Both the White House Conference and the Committee on the Grading of Nursing Schools agree that the present system of nursing education is not giving the communities well-qualified nurses. Therefore, should not the American Hospital Association go on record as favoring the closing of schools in hospitals having a daily average of less than seventy-five patients? Should not the American Hospital Association also recommend that hospitals having a daily average of over seventy-five patients that wish to maintain schools meet the minimum standards of nursing education as stated by the National League of Nursing Education?

The medical social service committee in its report gives evidence that there is a serious lack of adequately trained hospital personnel. This committee recommends, however, that there be no extension of the service unless adequately trained personnel can be placed in charge.

The community responsibilities of hospitals are implied rather than stated. The report of the section on public health administration deals with the hospitals' community responsibilities. The various committees on state, local, public, and private organization dealing with the health and protection of children recognize the hospital as part of the community program, and the availability of hospital beds as essential to every community. The national survey on the use of preventive medical and dental service for children under six years of age is an important contribution to literature on preventive medicine.

The report of the committee on medical social work should be of special interest to hospital leaders inasmuch as the interests of medical social workers are closely identified with medical institutions and their community relations. The committee finds that only 10 per cent of the hospitals of the country now have social service departments. The report presents a discussion of the function of such a department, gives illustrative material as to the present activities of medical social work, discusses convalescence for children through the use of foster homes, tells how the social service department should be organized, deals with problems of personnel, and discusses community relations. This material should be of general interest to hospital people.

Some of the interesting conclusions presented in the report of the committee on medical social work are as follows: (1) the true purposes and specific contributions of medical social service to hospital administration are not clearly and generally understood; (2) the special contributions of social service to hospital administration are not clearly and generally understood; (3) there is an ineffective organization of medical social service in its relation to clinical medical service and to hospital administration; (4) there is much inef-

fective organization of hospital social service in relation to the public health and the social welfare resources of the country; (5) the division of responsibility for service between hospital social service and public health nursing is not clear; (6) cooperation between hospitals and community social agencies is hampered by the lack of pertinent medical knowledge and the lack of discrimination in the use of medical facilities on the part of nonmedical social workers.

The report contains a number of specific recommendations. One of these suggests that the need for medical social service for patients in small hospitals be studied and that suggestions be formulated for meeting this need. A group to further such a study might well include representatives of a national organization interested in hospital administration, of medical practice as applied to rural and small communities, of public health nursing, of community social welfare, and of medical social service.

In all professional groups, the initiative for carrying out corrective recommendations should probably rest with the professional group itself, but many of the recommendations for medical social service can be carried out only if there is a sympathetic understanding on the part of other professional groups in the hospital and the hospital administration.

Those responsible for taking the measure of progress in the terms of added cost to hospitals may well feel that, if the hospital assumes its responsibilities, the question of financing medical institutions must be reckoned with, whether they are tax-supported or dependent on a generous public. The progressive community must accept the added burden that such a program would place on it and must recognize that this service to the citizens of the future is justified.

8. Dental Clinics in the United States; A Story of Their Progress, by *Miriam Simons Leuck**

THE importance of adequate care of the teeth has been increasingly recognized in recent years. At the same time there has been equal appreciation of the fact that these new services demand a seriously high additional expense for the person of average income. It has been suggested that the dental clinic may be one solution. A willingness to test this solution is indicated by the striking increase in the number of clinics in the last decade. Three important motives have underlain this development of clinics: (1) to provide service for persons who cannot afford the services of a private practitioner; (2) to carry out the public health principle of prevention by caring for children's teeth; (3) in hospitals, to provide dental service as an aid in the treatment of the patient.

In 1922, Dr. Michael M. Davis, at the request of Julius Rosenwald, made a study of the facilities for dental care throughout the country. At this time, the result of inquiries sent to 282 general hospitals including almost all those in the United States of 100 beds or over

* Adapted from *Mod. Hosp.* 38:95-97, May 1932.

This article is based on two publications by Mrs. Leuck, *Study of dental clinics in the United States, 1930* and *A further study of dental clinics in the United States*, both published in 1932 by the University of Chicago Press.—Editors.

disclosed that 89 out of 144 hospitals replying rendered some type of dental service. Eight years later a survey of all the dental clinics in the United States, conducted under the auspices of the Committee on the Study of Dental Practice, American Dental Association, reported 462 dental clinics in hospitals and a total of 1530 dental clinics in existence. For the purposes of this study a dental clinic was defined as any institution or organization that renders dental service. Private practice alone was excluded, as were services in hospitals where dental work was confined to oral surgery or in which the dentists on their staffs gave treatment only as private practitioners. The intervention of a third party between dentist and patient and the continuous rather than sporadic offering of dental treatment were made the determining factors of the definition, rather than the age of the patient, his financial condition, or any other circumstances.

The rapid growth of dental clinics has not, of course, been confined to hospitals. Four hundred sixty-one of the 1530 clinics reported were maintained under the auspices of boards of education and boards of health or under their joint control. Dental schools and dental societies maintained 46 clinics, while dental schools and dental societies in cooperation with other organizations carried on 91 more. One hundred ten clinics were maintained by states and counties in prisons, reformatories, homes, and orphanages. Seventy-four clinics were under federal control. Industries, trade unions, and fraternal organizations had established 84. Ten were run in connection with group clinics, and 180 under various lay organizations such as charitable associations, community chests, the Red Cross, and religious organizations. Twelve could not be classified under any of these groups.

Of the 462 clinics under hospital control, 94 were in state hospitals and are not considered in the statistics about hospital clinics given in the rest of this article. Of the 368 other hospitals reporting dental clinics, 29 were city hospitals, 24 were county hospitals, 18 were hospitals conducted in connection with medical schools. The remainder could not be classified. In general, clinics in hospitals have not tended to bring in outside control although a few have shared such control in connection with cooperative clinics for school children or other special classes.

Dental clinics exist in every state in the union. Over a third were in Pennsylvania, Massachusetts, New York, and Ohio. In contrast, Mississippi, Nevada, and Wyoming each reported only one clinic. Over 80 per cent of the clinics have been established in the East and Middle West. Clinic service is almost entirely an urban development. The larger a city, the greater is the number of clinics within its borders. Sixty-six per cent of the hospital dental clinics were in cities of 100,000 population or more, 21 per cent in cities of from 25,000 to 100,000, 7 per cent in cities between 10,000 and 25,000. Board of education clinics reached their chief importance in cities of from 25,000 to 100,000 and board of health clinics in the somewhat smaller communities. Industrial and charity groups were largely in the big cities.

In cities of 100,000 population or more, the hospitals provided 40.9 per cent of the total number of clinics, their importance sinking to 22.2 per cent in the next size cities and decreasing rapidly as the cities grew smaller. No other single agency even approached the

hospital clinics in importance in the large cities, the nearest group, the industrial, providing less than 9 per cent of the total number of clinics in those centers. In cities of 25,000 to 100,000, however, there were more board of education clinics than hospital clinics, and in cities of 10,000 to 25,000 the board of education clinics made up 30 per cent of the total as compared with nearly 12 per cent controlled by the hospitals.

As with clinics of all types, the largest number of hospital clinics (36 per cent) were in the Middle Atlantic states and the smallest number, 3 per cent or less, in the South Central states and the Mountain states.

Dental care was given during 1930 to 1,962,791 patients by the 80 per cent of the clinics reporting the number served. Statistics on visits are of little value in the dental profession because they vary from operator to operator, from institution to institution; for example, a clinic which prefers to keep the sittings of patients of equal length will require one or more visits in order to complete an operation which, in another institution, would be finished in a single session. Since many clinics, particularly those connected with hospitals, record only the number of visits, however, a report on visits was requested to assist in classifying the extent of service rendered. The 804 clinics who replied to this question reported 2,796,147 visits in 1930.

The possession of one or more chairs by a dental clinic is an indication of its present or potential service, and its intention to provide continuous rather than strictly limited dental treatments. A request for the number of chairs possessed by the clinics, therefore, was included in the questionnaire sent out to the clinics. One thousand one hundred fifty-three clinics reported the possession of 3315 dental chairs, or an average of 2.8 chairs per clinic. Two-thirds of these chairs were in clinics in cities of 1000 population or more. A five-chair clinic in a city of 1,000,000 population is relatively unimportant in the mass of dental service rendered in that community; a five-chair clinic in a city of 2500 inhabitants, on the other hand (unless in an institution with its services limited to the inmates), may absorb the entire dental work of the area.

The statistics indicate that in the larger cities (with a population of 100,000 or more) there was one chair to each 12,500 persons, while in cities with population from 5000 to 10,000 there was an average of one chair to about 6650 persons, and in towns with a population of 1000 to 2500, an average of about one chair to about 1800 individuals. Hence, although but few small towns have dental clinics, when a clinic does exist in such a community it may play a larger part in the service of the area than it would in a larger city.

The largest number of chairs, 225, was reported in a dental school clinic. Such clinics never use all of their chairs to full capacity and are practically all found in large cities. These facts must be taken into consideration in measuring the amount of clinic service generally available in large communities.

The clinics studied varied in size from small one-chair units serving school children or community charity cases to clinics established by endowments or similar agencies which serve tens of thousands of patients annually. The 1930 survey indicated that one-fifth of all the clinics in the country serve less than 174 patients a year. In contrast to this another fifth

served between 2000 and 100,000. The number of patients cared for by the other three-fifths ranged from 175 to 2000. One-third of the clinics serving the largest numbers were in cities of 100,000 or more. There is a considerable difference of opinion among those interested as to whether the most significant developments in the field are the few large endowed clinics or the many small ones.

Fifty-one per cent, or 1,006,918, of the 1,962,791 patients reported were children. Thirty per cent, or 596,956, were adults, and 18 per cent, or 358,917, could not be classified. Forty-eight per cent of the clinics reported accepted only children, 16.7 per cent admitted only adults, and 34 per cent took care of both. The remainder failed to report. Dental clinics in hospitals have a greater tendency to serve both children and adults than do dental clinics as a whole. Of the hospital clinics, 79 per cent offered their services to both, 8 per cent served adults only, and 10 per cent served only children. Dental school clinics were the only other important group which served both adults and children. Industrial clinics, the Veterans' Bureau, the Public Health Service, and the state correctional agencies limit their service to adults, with few exceptions. Boards of education, boards of health, charities, health associations, lay and fraternal organizations are as strikingly interested chiefly in children's dentistry.

The extent of the need for dental service is indicated by the fact that dental clinics have been established under such varied lay auspices. Not only have such groups as the charitable organizations, the Red Cross and the Visiting Nurse Associations established clinics, but clinics have also been sponsored by groups as varied as the American Legion, Babies' Milk Fund, churches, fraternal organizations, settlements, the Junior League, and the Y.W.C.A. Local conditions and demands undoubtedly have been the determining factors in bringing most of these types of dental clinics into being and, on the whole, where they succeed, the tendency is for them to be taken over by some governmental agency.

The types of service rendered by these dental clinics varied from simple prophylactic treatment given in clinics without chairs to complete dental service. Some clinics do emergency work only. In the space on the questionnaires reserved for "Remarks," a few hospitals reported that they limited their clientele to particular types of patients, such as tuberculous, mental, or maternity cases. Four reported that their service provided examination only, 20 limited it to extraction, 3 to x-rays, and 45 reported other limitations. Fifty-two stated that full dental service was rendered.

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CHAPTER XIII. MEDICAL SOCIAL SERVICE

I. Standards in Medical Social Work, by *Ruth Emerson**

THE primary objective of every medical institution is to give adequate care to each patient. The institution recognizes the dependence of the physician on the personnel and facilities within the hospital and in the community, and seeks to give a rounded kind of service which will help each patient to secure the maximum of benefit from the physicians' knowledge and skill and from its resources. Consideration of the standards of any department within the hospital—medical, nursing, social work, dietary, etc.—focuses on the quality of the care made available to the patient through the correlation and use of the institution's facilities and of the health and social services within the community. Standards of service rendered by medical social service departments may be said, therefore, to be bounded on the east by the quality of the professional medical care, on the west by the adequacy of the social service staff, on the south by the general standards of living and social endeavor within the community, on the north by the adequacy of the programs and the performance of the social agencies in the community.

To elaborate this a bit: One sees the social service department as a part of the hospital and clinic, and also of the community. The interdependence of this department and other departments within the hospital is such that unless all are of high quality the social service department is itself handicapped in rendering a service of high quality. If the community is lacking in facilities for various kinds of services to individual patients and families, the social worker in the hospital is again prevented from helping to meet the need of the patient in a truly adequate way.

For example, in a children's hospital where youngsters may remain over long periods of time, as for orthopedic conditions, the normal development of the child requires that he be stimulated, that he exercise his muscles and his mind, and that he form health habits. Any hospital where the energies of such children are not purposefully directed can tell you of the behavior problems which arise—sometimes, for example, in the child's refusal to eat, or in his obstreperous action with other children, sometimes in his insistence on going home and his family's agreement to take him before his treatment has been completed. The social worker may recognize these needs of the child, which are as important to his development as is his strictly medical care, but can do little about them without a program of occupational therapy and school teaching. Or, if in the community there is no service for the adult convalescing from pneumonia and he must return to a lodging house with inadequate food, the social worker's efforts to help him through this period assume undue proportions and are often almost negated; or, if there is no resource for a cardiac young person to secure vocational training or employment, she is enormously handicapped, if not prevented, from helping him take his place in society. Communities, of course, vary in the complete-

* Adapted from *Hospitals* 12:21-24, Mar. 1938.

ness of their social and health programs, and these affect not only the adequacy of the service rendered by the hospital social worker, but in some measure definitely influence her practice. Nevertheless, with all these variances, and with a full awareness that each patient presents a different medical and social situation which requires an individualized approach, it is possible to define with reasonable clarity the functions of the medical social worker. We use this word "function" deliberately, to mean activity appropriate to the agent in contrast to practice which often differs and may be conditioned by expediency or pressures or ignorance.

The accepted statement of function is based on various studies made and tested in a scientific way: "The activities in which the social service department may appropriately engage and which should be developed in close collaboration with the medical staff, are the following: (1) practice of medical social case work; (2) development of the medical social program within the medical institution; (3) participation in the development of social and health programs in the community; (4) participation in the educational program for professional personnel; (5) medical social research."¹

The practice of medical social case work is the core of the department's activities, so it is important to consider first what is meant by this phrase. The statement reads: "Medical social case work involves the study of the individual patient's social situation, interests, and needs in relation to his illness, and the medical social treatment of the patient in collaboration with him and his physician, when those social needs and interests affect the physical and mental health of the patient."²

This is a pretty concentrated definition and perhaps will be clearer to you if I break it down a little as is done in one of the studies on which the Statement of Standards is built: "(1) Inquiry into the social situation of hospital patients and the reporting of findings to the responsible physician; (2) Determining, in collaboration with the physician, the factors in the social situation pertinent to the patient's health and stating these as medical social problems or diagnoses; (3) Setting up, in collaboration with the physician, a possible goal or best estate for patient to aim for, given the medical problems and the social situation of patient and distinguishing the role the social worker is to play in plan for helping patient achieve the goal; (4) Executing the social worker's part in the plan for helping patient achieve his best estate."³ Putting these points together again we may say that the social worker's job is to help the patient make the best adjustment possible in the face of his situation (medical and social) in order to prevent his being socially disabled.

This service to individual patients is the essence of medical social work, and no department, no matter how many other activities it may be engaged in, can be said to be truly respectable, i.e., have any degree of excellence, unless it consistently, day after day, is providing a social study and treatment program analogous to the doctor's medical study and

¹ *A Statement of Standards to be Met by Medical Social Service Departments in Hospitals and Clinics*, a report of the Committee on Standards, adopted May 1936. The American Association of Medical Social Workers, p. 4.

² *Ibid.*, p. 4.

³ Functions of Hospital Social Service, a report of the Committee on Functions, *Hospital Social Service* 17:445, 479, 1928.

treatment. In many institutions this primary function has been submerged by secondary functions in which the social worker applies in a fractional way this case study method, and in so doing undoubtedly facilitates the medical care of a large number of patients, but such services have dangers which an analogy in the medical field may illumine. A doctor in any set-up where large numbers of persons are routinely examined, who himself routinely checks hearts and lungs, usually does not improve his skill as a practitioner but becomes a less skillful physician. In other words, a fractional study of an individual by either a physician or a social worker is liable to miss important considerations, to fail to consider that individual as a total personality, and to dull the perceptions of the worker, who gradually loses her skill. When a social worker has been assigned to the admitting of patients to a clinic, to review patients from a hospital ward just prior to discharge, to assume responsibility for the follow-up of patients, there is usually opportunity for only a fractional consideration of the patient, and a deadening of the sensitivity of the worker to a full awareness of the medical and social implications which may be of great importance to this or that patient. This is not to say or to imply that the admission of patients to a hospital or clinic may not be an appropriate function of a social service department, but to say that any department which renders only services of this character is failing to perform its primary function of social case work.

One of the factors which perhaps enters as much as any into the failure of many social service departments to practice a high quality of social case work is the traditional custom of the hospital to use any newcomer to try to patch up poor clinic organization. The hospital is conditioned in part by its tradition of not expecting to spend money on its out-patient department. We find social workers performing services that could be performed as well if not better by clerks, sometimes services more appropriately within the nursing field, and at different times covering a large gamut of assorted varieties of activities, such as arranging for transfusions, calling ambulances, et cetera. Such practice by the individual worker or by the workers collectively—the department—often means stagnation within the department, and raises a question as to whether the hospital as an institution is getting full value from its social service staff.

I would list as of first importance in building a department of quality, the selection of personnel. In the early days of medical social work, persons without special training were drawn from social agencies of the community or from the schools of nursing. Each year has shown more clearly that medical social work is essentially a social case work job with a foundation common to all fields of social case work, and that it has an additional requirement, namely, the application of these case work principles to the clinic or hospital field, which requires an understanding of medicine, medical organization, and the sick person. The staff, therefore, must be composed of individuals who by education and experience have knowledge and understanding of medical problems and their social implications, of medical institutions, and are grounded in social case work and have skill in its application to the special field of medical social service.

On the way in which a department is organized depends to a considerable degree the ef-

fectiveness with which it is conducted. Again, out of diversified practice we have come to see clearly that all departments within the hospital should be directly responsible to the administrator. The head worker of the social service department should report to the chief of the institution; the budget should be part of the institution's budget; policies should be in harmony with the institution's policies. The head of the department, in common with the heads of other departments, should be held responsible for the administration of the department—the employment of personnel, preparation and expenditure of budget—and should be a member of conferences at which policies of the institution which have social significance are discussed and formulated.

Further considerations require that we turn our attention to the facilities which are available to this department. The social worker cannot interview or counsel with an eighteen-year-old boy who has a cardiac condition that requires him to reorganize his life and consider a different vocation, sitting on the edge of a settee in a busy waiting-room or standing in a corridor in the clinic. It must be possible for the patient and the social worker to have a sense of privacy if he is going to bring out into the open those considerations which seem to him to be of particular importance, or if she is to make him feel that she is working with him and the doctor to the end that he have as nearly a normal and satisfying life as is possible. Just as medical institutions are short of personnel, so most medical institutions are short of space, and the need for quiet interview rooms seems not to be taken very seriously. In connection with facilities I would stress the need to have offices accessible to patients and doctors, telephone connections, clerical staff, and funds for supplementary services.

The purpose of social records is often misunderstood, and their importance not recognized. In a recent survey of hospital social service departments in New York City, Dr. Haven Emerson commented on the variety of records which he found—some on 3 by 5 cards, others consisting of a few notes in the worker's office or on the medical chart, and others complete records available to the social worker and physician for use in the care of the patient. If the patient's medical care is to be planned in the light of his particular social situation, it is important that material which describes his environment, his attitude toward his condition, and his social situation be available to those who are working with him and to others who will be working with him at a later date. Although doctors and social workers have trained themselves so that their memories are amazingly full and accurate in regard to patients, one needs to select the pertinent and significant data and to set them down for further study and use. No medical institution would think of having only stray notes written by doctors, and yet some institutions are satisfied with that type of social record. It is impossible to say definitely the point at which "enough is enough," but again from studies we do know that without thought, which takes time, it is impossible to enter the data which will be useful. In a department which is concerned with its "level of excellence," attention must be given to recording. This means time for the worker to think; the record provides a basis for testing her thought and work.

I find it difficult to arrange these various points—personnel, organization, records, facili-

ties—in any weighted order, and I would choose rather to arrange them on a circumference of a circle at the center of which I place the patient, because they all come into being to meet the needs of the patient; their utilization converges in meeting the needs of the patient. Then I would set this circle in a larger circle called a committee—a committee to understand these several points—a committee composed of the administration of the hospital, the clinical staff, and lay persons who would through knowledge of the institution as a whole and special interest and understanding help the head worker of the social service department think through problems in the department to effect a more complete integration within the institution and the community. For example, not infrequently the head worker is weighing the need for another staff person, let us say, on the cardiac service, or the tuberculosis service, or the pediatrics service. Not infrequently she is confronted with the question of how far out of its immediate function the department should go in the light of community failures, community lack of resources, as, for example, the placement of a chronic cardiac patient for whom Oak Forest is most unsuited. Should the department find a nursing home for such a patient and pay for the patient's care? Or what should the department do in the case of a family about to be evicted—a family in which the mother has a hyperthyroid condition for which the doctor feels it is of the greatest importance that she be freed from emotional strain so that the operation may follow most satisfactorily, but no agency in the community will pay the rent? Out of experience with such cases policies are evolved and joint thinking in their formulation is of value.

A committee conscious of the hospital's purpose, of the function of the social service department, interested in and conversant with facilities in the community, can be of great help in clarifying such questions and formulating policies. A committee with such intimate knowledge will in turn be able to interpret the department to clinicians, administrators, and others in the community. Although funds for the social service department should be part of the hospital budget, hospitals are now, and I believe are going to be in the future, so pressed for various expenditures that for the social service department to have that "grade of advancement generally regarded as right or fitting" will require in many instances funds greater than those which can be allocated out of the hospital budget.

I hope from what I have already said that it is clear that money in itself will not secure a level of excellence or determine the level of excellence. The "level of excellence" will be obtained only through the better integration of this department within the hospital, and the better performance within the department itself; such integration requires the intelligent understanding and interest of a special group of persons who make it one of their first jobs.

2. A Basis for Mutual Understanding between Doctors and Social Workers, from the Standpoint of the Hospital Executive, by *Joseph C. Doane, M.D.**

It seems to me that there is some need for a better understanding between the administrator and the social worker, and that a clarification of these intra-hospital relationships will

* Adapted from *Tr. Am. Hosp. A.* 28:184-191, 1926.

go far toward bringing the service of the social worker more certainly to the aid of the doctor in the treatment of his patient.

Many years ago we learned that things equal to the same things are equal to each other. Administratively, paraphrasing this geometrical statement, it would appear that if the doctor and the superintendent are in agreement as to the ends to be gained in hospital work, and the social worker and the administrator are in like accord, no valley of distrust should separate the doctor and the social worker. However, the administrator occupies the pivotal position, and is equipped, in consideration of his official place and his training, to act as an efficient liaison officer between these professional workers.

Hospital social service is a growing child, born in the early days of the twentieth century, which gives ample promise of developing into a useful and unselfish maturity. The morbidity record of its first two decades of life discloses the fact that it has been afflicted with certain ailments of minor importance, from which convalescence has been rapid and uneventful.

'Twas left for Boston, the erudite, to demonstrate to the medical world that often sick people have more organs and attributes than the hearts and livers, or virtues and vices, which may happen at the time to be refractory. It was almost simultaneously discovered that the story of the hospital life of the sick man is often but a comparatively brief, and sometimes unexciting, episode in the patient's life volume, containing no tragedies, or illustrations; that a true understanding of the drama-tragedy, or sometimes even comedy, represented by the patient's life can only be gained by a reading and rereading of earlier chapters in the story of his vital history. Thus came into existence a group of persons—of specialists—whose duty it was to skillfully complete this volume, for the sole purpose of making possible a true estimation by the doctor of the patient's illness.

It has been repeatedly emphasized that the function of the hospital social worker is to aid in preventing sickness and in the relief of those who are ill. But, although a goodly proportion of the hospitals in this country have accepted the medical social worker as an essential member of their personnel, yet there are institutional executives, as well as not a few members of the visiting staffs of our hospitals, who still scoff at the need for her service. There are those who honestly believe that the chief function of social service is to noisily agitate long-closeted ancestral skeletons; to unblushingly inquire relative to matters which are usually not considered as suitable topics for mixed conversation. There are others who, with lifted eyebrows and shrugged shoulders, maintain an oppressive and seemingly hopeless silence when the subject of hospital social service is mentioned. And there is yet another type, which finds its representatives on hospital boards and among institutional executives and physicians, who, while believing that there is much of good in the practice of social medicine in the hospital, hopelessly muddle a well-intended prescription because of a lack of knowledge of social diagnosis and therapeutics. Fortunately, there are many executives, doctors, and nurses who respect the social worker as a well-trained specialist who can render to the patient a valuable service to speed his return to health and usefulness.

Nor is this lack of understanding of the aims and methods of others in the hospital per-

sonnel always on the side of executives or physicians. There are hospital social workers who look upon the man or woman who underestimates or misuses their abilities as a fossilized individual whose dotage has long since become well advanced. There are social workers who smile pityingly when a request to locate Mr. Sullivan's false teeth comes from the medical ward, when a much more interesting and difficult social request might as easily have been forthcoming. There are workers who, not thoroughly understanding just where their duties begin and end, failing to learn or regard lines of authority in hospital organization, get hopelessly in the bad favor of resident physicians and nurses by seeming to meddle aimlessly in the business of getting the patient well. And there is the social worker—who typifies the majority of her profession—who, possessing adequate education, tact, and native judgment, quietly but efficiently performs the work of her hospital specialty so that all quickly recognize her true worth to her institution. When executives, doctors, and social workers labor together a great good results from intelligent cooperative teamwork.

Is there a common ground upon which hospital superintendents and social workers may meet? How can these professional types, which so often misunderstand and improperly evaluate the methods and aims of each other, be brought to a state of efficient and frictionless cooperation? It would seem that I might end my thesis here, by stating that each can and must strive for but one end—the speedy and permanent relief of sickness; that with this purpose actuating their every professional thought and action, no time or excuse for misunderstandings can exist; that the basis of their mutual efforts must be the welfare of the sick man. But hospital superintendents and social workers, contrary to the belief in some quarters, are not usually super men and women, but are just people who, while possessing many admirable qualities, often exhibit some very human traits. As a result, the hospital social worker finds herself and her department misunderstood by the hospital superintendent, or vice versa. What are the basic causes for this unfortunate and, to the patient, most serious lack of mutual understanding? Briefly, it appears to me they are as follows:

1. A lack of knowledge on the part of hospital executives of the aims and methods of the modern well-trained social worker; or, what is even worse, the presence of a preconceived conviction as to the doubtful value of the practice of social medicine in the hospital.
2. A lack of understanding, or observance, on the part of the worker as to the organization, lines of authority, and methods of conducting the daily work of the hospital.
3. Improper organization of the hospital in so far as the social service department is concerned.
4. Lastly, a lack on the part of both of certain basic qualities such as tact, administrative ability and pliability, which should be inherent, and the absence of which serves to make the executive hasty and arrogant or the social worker restive or insubordinate under the authority of the former.

Faulty preparation of either for his or her specialty may produce in a measure the same result.

That there is too great diversity of opinion among executives as to the nature of the return to the hospital which should be expected from the activities of the social service department seems indubitable. To some, the social worker is a glorified and yet not altogether satisfactory bill collector. She is sent on miscellaneous errands and asked to perform various institutional tasks for which there is no provision in the personnel of the hospital budget. Her position in some institutions is to be classed somewhere between that of a cash girl in a department store and the telephone clerk at the information desk. For example: in a certain hospital, the superintendent is content to require or allow the social worker to perform the duties of the clerk who answers the telephonic queries of the public relative to the condition of patients. This may be done just as satisfactorily by an untrained person receiving fifteen dollars a week for her services. In another, the social service department is a part of the business office, being housed therein, and a large proportion of the social worker's time is consumed in making financial investigations. This is the acme of mistakes in organization, and a faulty and expensive utilization of the time and effort of the representatives of what should be a highly trained specialty. In passing, it may be observed that where such an arrangement exists, usually the personnel of the social service department in question is undertrained or undervisioned or underpaid, or it would not be content to work many days in such a false position.

Such a status is not conducive to a proper respect by others in the hospital family; and the reasons for such a waste of time and talent may sometimes be found (indeed, usually are found) in a misconception on the part of the superintendent as to what the medical social worker should really be doing for the patient. This misunderstanding may be due to the lack of proper preparation for the job of conducting a hospital on the part of the hospital administrator. It may result from a failure to realize that the medical social service division oftentimes has as definite a contribution to make toward speeding a return of the patient's health as has the laboratory, x-ray, or physical therapy department; that the social worker is to go out into the community in a quest for facts which will aid in the cure of disease, and if perchance she returns with dollars in coin or in knowledge of a patient's ability to pay as well, this is a fortunate, but not an essential circumstance. Then, too, this uncertainty in the mind of the superintendent as to the importance to the patient of good, well-conceived and executed social service work oftentimes leads to the lowering of standards for social workers, and the employment of persons who, while of satisfactory personality and high social standing, are not qualified from an educational standpoint. The social service department is not the catch-all for widows of formerly distinguished but now deceased staff or board members.

The housing of this department in inaccessible and insufficiently lighted and ventilated quarters is another handicap which this same frame of mind on the part of the executive brings.

To more thoroughly acquaint the undergraduate in medicine with the social aspect of disease, both as to cause and cure, and to give social service work a prominent place in the curricula of schools for hospital administrators, are steps which should require but little ar-

gument to convince educators of their wisdom. In the curricula of most schools for social service, more or less instruction is given in the organization and conduct of hospitals. Usually a qualified hospital administrator is chosen to deliver these talks. An effort is made by graphs or charts to show the routing of orders and correspondence, and to set forth the relationship of the various major members of the hospital personnel. The new social worker, knowing, for example, that there is but one path from her desk to the chief engineer (and that by way of the superintendent's office), does not early become mired in the swamps of institutional discord before she is actually started in her work. She learns much of this thing called "hospital etiquette"; of the time-honored but oftentimes fallacious traditions of interns and nurses in regard to their relationship to the patient. She gingerly steps over the imaginary line which from time immemorial has been drawn around the patient's bed and beyond which, until recently, none but doctors and nurses dared pass. Here, again, a knowledge of the methods and motives of those around her is the factor which makes it possible to synchronize her efforts with others who are just as earnestly endeavoring to aid the sick.

The machinery of a hospital of any size is most complicated in its structure and function. To gather together a large number of men and women, of all grades of intelligence and aptitude, and to constantly focus their activities on but one point is most difficult. To efficiently fit into such a complex organization, then, requires much tact, a thorough understanding by the social worker of her own duties and institutional limitations, and a general idea of the work of others around her. This is the second important step in the helpful mutual understanding between her department and the superintendent of the hospital and his co-workers.

Centralization of authority is a basic principle necessary to the success of any undertaking. It is a faulty hospital organization which overlooks this principle when establishing its social service department. It is with no desire to add to the superintendent's authority or prestige that I express the opinion that there should be no parallel lines of authority within the hospital, and that all such lines must converge at his desk. The term "authority" is here used not in an offensive sense, but only to indicate a relative institutional responsibility which is, of course, most necessary.

Where the hospital social service department has been underwritten by a group of generous and self-sacrificing women (as is often the case) and is maintained by this committee, oftentimes it remains essentially as an extrahospital organization; its directress, while responding to the requisitions from visiting physicians, is not in reality answerable in administrative matters to the hospital executive. In other words, here is a line in the organization graph which proceeds from the hospital around the desk of its superintendent. With the exercise of tact on the part of the worker and the superintendent, this form of organization may be productive of the very best results. However, when the hospital has within its active, scientific personnel a group whose qualifications, salary, and duties the superintendent oversees only in an advisory capacity, friction is invited and, as a result, the focusing of effort on the patient's bed is hindered.

A recent interesting survey of the hospital social service field reveals that in forty-three departments studied, the directress answered to the superintendent in twenty-six; to a social service committee in eleven; to both the superintendent and a committee in three; to the board of trustees in two; and to the superintendent of nurses in one. One would surmise that in the instances where the directress was held administratively accountable to an outside committee, the money required to conduct her work came from the same source. This proves to be the case.

I would not have it understood that I am in any way deprecating the value of an advisory committee to the hospital social service department. It is, however, folly for any venture to be conducted on a personal basis instead of on the firmer foundation of a rational, well-worked-out and thoroughly understood businesslike organization.

Now I am aware that some will take exception to the term "business" in any connection with hospital social service, but the directress of this department must be an administrator who has the ability to stretch every dollar given her to the snapping point. She must know how to save on telephone, telegraph, and taxi bills. She must weigh the cost as against the advantages to be gained before she submits a recommendation to the superintendent of the hospital. It is not generally true that the mind of the social worker is soaring so high in search of an ideal that it cannot understand the fact that most hospitals are poor. She may even surmise that sometimes her own hospital superintendent, who demurs at some new expenditure for her department, is losing sleep wondering where the money to meet next month's grocery or coal or x-ray plate bill is coming from. So the social worker can do much to establish herself and her department in the estimation of the hospital superintendent by exhibiting a practical regard for business methods in administering her work.

There is a golden quality which no didactic training will supply. In its absence the social worker chooses an inopportune moment to curtly inquire of the superintendent, who is just then struggling with his monthly financial deficit, why her workers cannot have a new car to ride in, one that does not rattle. It is the possession of this quality that makes the social worker choose some other time than just after a heavy operating day to inform the tired surgeon concerning the reasons for her failure to promptly secure a brace for one of his patients. The superintendent does not possess this virtue who criticizes some act of the department of social medicine in the presence of others than its directress. It is the leveler of many administrative roads—it is that thing called "tact."

No wise hospital executive displays any suggestion of arrogance toward any of the hospital's personnel, for the administrator has but coordinating, and not in the least kingly, prerogatives. Of course the head of any department must expect direction from the institutional head as to general principles and policies. On the other hand, no executive of wisdom and experience would attempt to meddle, in so far as the actual work of a specialty such as the social service department is concerned. To choose departmental heads carefully, and then hold them responsible for the discipline and the details of their respective divisions, is a wise policy to follow.

I have intimated that education on the part of some executives in regard to the methods

and aims of hospital social service is necessary. Members of boards of trustees, as well as the public, need this instruction in no less degree.

If the hospital social service department is to be judged solely on the basis of the actual money which it returns to the hospital, as compared with its cost, it is a dead failure. If the hospital superintendent persists in making this balance sheet his only basis for estimating this department's value to his hospital, he is just as dead, and equally as great a failure, administratively. But there is no social service department, well staffed and salaried, which is not saving its community and its hospital many times its expense in other ways. The social worker can prove that she is financially worth while. One example will suffice: In the maternity department of a certain large municipal institution there were always from ten to twenty women who, for various reasons, were admitted from one to three months prior to delivery. A prenatal clinic, with an active social service aid, reduced this number to from two to four. Problem: How much money at three dollars per day did that worker save her hospital in a year? Lest I appear to be branding too certainly the cause of social medicine with the dollar mark, let me say that I am but endeavoring to refute the argument offered by non-understanding lay people that the social worker is not a producer of financial return to the hospital.

Follow-up care, adjusting work to heart power in the cardiac as well as securing prompt removals from the institution after discharge, are all activities which benefit the patient immensely and save the hospital much money as well. Then, too, when the worker learns of exposure to contagion, or even suspects that it has taken place, because of observing a quarantine sign in the same block from which the child came, she saves her institution much expense and wasted effort by reporting these facts and thus preventing the transfer of the quarantine card to the hospital itself.

The superintendent can do much to make the work of the social service department of most aid to the doctor. He can insist on well-trained workers and pay them living salaries. He can provide dignified quarters for officers and adequate furnishings therefor. He can require that this department be properly placed in the hospital organization and that lines of authority toward and from it are adhered to. He can support the directress in intra-departmental discipline and free her department from duties which do not rightfully belong there. He can encourage the staff to use and understand this department.

3. Some Professional Relationships of the Medical Social Worker within the Hospital, by *Elizabeth Rice**

Social service departments in many hospitals today are concerned not only with social case work but with social administration, including social admitting and social clinic management. The medical social worker in a modern hospital today is not an isolated individual working apart from the other professional groups in the same institution. To function adequately, she must be closely related to several other professions within the hospital but

* Adapted from *Tr. Am. Hosp. A.* 36:684-688, 1934.

especially with those with which her work is most closely connected, namely, medicine, nursing, and dietetics. She must recognize herself as a member of a team of experts who contribute from their training and experience to the total situation in order that through this total picture the team may give as adequate care to the patient as possible.

In order that the medical social worker shall contribute effectively in this team relationship, three prerequisites are necessary. First, she must be a person with adequate training in her field in order that she may have a skill in social study and treatment which is apparent and recognized by cooperating professions. Second, she must not only have the skill but she must know how to relate and interweave it with the skills of other professions. Third, she must have a sincere appreciation of the contributions of the other professions to her case study and treatment.

Without this skill or without the knowledge of how to interpret and relate her skill to the skills of others in the hospital, her contribution in this team relationship is never carried through. I have seen two different things happen. A worker with adequate training and experience tried to work in a close relationship with a service of a hospital and failed because she was not clear regarding her own function in relation to the function of others within the hospital, and as a result other professions did not clearly appreciate her special contribution or the interrelatedness of their mutual problems. Also, I have seen a skillful case worker who knew her own function and the functions of other departments but was unable to interpret her function to those with whom she worked in the hospital, so that again there was no close relationship. I believe, therefore, that the medical social worker needs not only to be adequately trained in her own professional field in order that she may practice case work adequately, but she needs to know and appreciate clearly the function of her service in relation to those other services with which she is allied. But even with this knowledge she will fail unless she goes beyond to an appreciation of the contribution which she can make to other groups within the hospital and of their contribution to her. I would like, therefore, to consider professional interrelationships within the hospital rather than the simpler, direct relationships.

Accepting the fact, then, that the medical social worker should have adequate training and experience, and should at the same time have a knowledge and an understanding of the fields of other professions within the hospital, how does this interrelationship work and who is primarily responsible for it? The care of the hospital patient is and, I believe, always should be the major responsibility of the physician. It is for his skill and care, primarily, that the sick person asks. He logically, then, becomes the leader of the team of experts available in the hospital to care for the patient. Since he takes this position of leadership, I shall devote more time to a presentation of the medical social worker's relation to him than I shall have time to do for the other groups.

As the leader of the team it is his responsibility to consider what assistance he needs for his patient from other sources—to decide on certain special needs in nursing care, on special diets, on physiotherapy, or occupational therapy, or specialists in other medical fields, or social service. The social worker's responsibility lies in interpreting her function in such

a demonstrable way that the physician sees and appreciates her contribution. The most satisfactory demonstration, of course, is the work itself and no amount of general discussion about function and relationships will give as convincing proof of the need of the service as will a case adequately studied, analyzed, and treated and one which has been clearly explained to the physician and understood by him. Too often, I believe, the medical social worker, having had the case referred, is content to work along herself, sometimes receiving medical data from medical records and at best from the physician but not relating clearly either in her own mind or in that of the physician the interrelatedness of his work and hers and the mutual and reciprocal interest of both in the case. Too long, also, have we said this lack on our part was due to pressure on either the social worker or the physician. There is nothing more important in the entire case treatment than that the physician and the case worker should work with knowledge and understanding of the part each is taking and the plans being considered in a specific case. This is, I am sure, the heart of the relation between the physician and the social worker and only by this mutual cooperation will the service of the social worker function skillfully.

There are various methods of developing this close working relationship between physician and social worker. Some of them may be listed as follows:

1. Assigning a medical social worker to a particular service with the understanding on the part of the medical service that she is assigned as their worker. This immediately arouses a feeling of "she is ours; she belongs to this service; she is our social consultant; if we don't use her we'll lose her, etc." All of which places her professionally and directly with the group as a member of that group. She is taken into staff meetings; she becomes in other ways a part of them.
2. Contributing through ward rounds the social aspects of the case as the case is discussed, whether this patient is known to the medical social worker or not. This allows for the social contribution to be made naturally and logically.
3. Conferring together when new problems or new data arise. There should be a free and easy approach between the physician and the social worker, and either should feel free to consult the other. Often this conferring has been one-sided—the social worker seeking the physician. However, as mutual understanding increases, the physician becomes many times the instigator.
4. Recording of social data in such a way that it is readily available to the physician. Our thinking on this is in its infancy, but out of the present experiments there should evolve a method which is satisfactory to both physician and social worker. The filing of the entire medical social record in the medical history seems not to focus the material at a given point or to interweave the social with the medical as conspicuously as I would like. The summary sheet also has its disadvantages. I believe the best method so far has been to place succinct and pertinent data, in a brief, summarized manner, chronologically in the medical history wherever it logically belongs. It then relates clearly and simultaneously the medical and the social data.
5. By conference method, having the opportunity to show end-results of certain cases over a period of time. Quite appropriately the interest of the physician is

at its peak during the time the patient is sick and lessens as the patient becomes better. The efforts of the social worker so often culminate at the point when the patient is better, so that unless the physician sees this end-result he does not see the final outcome of the medical social plan. This seems to me important, not only that he may understand the complete contribution of the social worker in the adjustment of the patient but also that he may gauge the results in order to help to determine similar medical plans with other patients. Knowledge of the outcome often, also, enlists the interest of the physician in the field of community resources and legislation which enlarges his vision and gives him a feeling of responsibility for public needs.

In this relationship, therefore, the physician is director of the team, asking assistance from those experts in other fields who he considers can help in the study or care of the patient, leaving to the expert the decision of action to take in his own field but always being the person responsible to tie all the threads together. The physician, therefore, does not direct the medical social study or treatment but steers it from the medical side and together the physician and social worker interweave the medical and the social. This relationship therefore becomes one of mutual and reciprocal interest and with this interest relationships are established, developed, and cemented.

The relationship with the nursing department is one also which has mutual responsibilities and results. The medical social worker is frequently placed in a very confidential relationship with the patient and secures from that patient much personal history which may or may not be in any way related to nursing. The medical social worker must herself determine out of her data what would help the nurse to give the patient more understanding care. A great deal of the social data might be of interest to the nurse, but I believe the social worker is bound professionally to pass on only those data which are, in her opinion, essential to the better nursing care of the patient. The medical social worker in turn can receive from the nurse much valuable information regarding the nurse's observation of the patient on the ward—his reactions and attitudes, his likes and dislikes, his idiosyncrasies, his use of free time, his hobbies, his temper and disposition, his condition on admission, his relation to his relatives and friends, the type of people they are, the regularity with which they come, etc. Such observation of the patient under the controlled environment of the hospital, given by a nurse skilled in observing the patient and with an appreciation of the social aspects in nursing, can make a real contribution to the medical social worker in her knowledge and understanding of the patient. These are data which are the nurse's real contribution to the social field and not, as has often been referred to, the nurse's attempt to secure a social history, which is usually only repetitive and less complete than the social worker's. In this division of function there is need of an understanding of each other's field in order that the functions of each may be complementary rather than supplementary or duplicating. Frequent conferences with the nursing department, making possible this interchange of knowledge, help to clarify the field of each and the contribution of one to the other. As in the medical profession, the nursing group should have some op-

portunity to know end-results in order that the nurses may realize the goal toward which the medical social worker is working and may see the way in which she can help in reaching that goal. Periodic case conferences, an easy give and take between the two groups, a respect for each other's field growing out of knowledge of the work of the other, are all methods of arriving at this complementary relationship.

The same relationship exists between the dietitian and the social worker. Each has knowledge of the patient needed by the other. With a clear understanding of each other's functions, it is relatively easy to determine what the other needs out of the bulk of material each has available, and by sharing this material the work of each is made better. The medical social worker accepts wholeheartedly the expert skill of the dietitian in her study of food intake, food orders, and budgeting and turns with eagerness to her for this assistance in planning for the patient and his family. The medical social worker respects her recommendations and has no more right to change the diet prescribed than she has to change a physician's prescription. The story goes that an infamous social worker once answered in the affirmative the following question: "The dietitian said I might have oysters but is it all right to eat clams instead?" Yet I am sure the same social worker would not have answered affirmatively, "The doctor said to take cod liver oil but may I substitute viosterol?" In other words the social worker needs an appreciation of the field of dietetics and a respect for it. The dietitian in turn, and properly, will turn to the social worker as does the physician to find the wherewithal for the patient to get what he needs and will rest with her judgment regarding the possibilities for so doing.

4. Professional Relationships of the Medical Social Worker outside the Hospital, *by Leonora Rubinow**

PERHAPS there is no single area in her entire field of activity in which the medical social worker feels so keenly the need for a re-orientation to her job as in her professional relationships outside her own institution. With the changing picture of social and economic living, particularly in our larger centers, with the metamorphosis of the hospital institution from a self-sufficient, seclusive entity to a vital force in community life, with the daily barrage of changing policies, the almost superhuman pressure of work, and the constant flow of new personalities in the field of relief, the medical social worker, if she is made of human stuff at all, is in grave danger of losing her perspective and becoming completely submerged. She feels the need for getting a clear picture of herself in this ever-changing panorama and of developing some sustaining philosophy, if she is to keep her head above water.

Never before has the work of the hospital tied in so closely with the things that are happening in the community. And because it is the medical social worker who stands at the strategic point where the two meet, where the flow in both directions is greatest, she has a rare opportunity for service to the people she is helping, to her own institution, and to the

* Adapted from *Tr. Am. Hosp. A.* 36:690-693, 1934.

community at large. But the complacency with which we have been accustomed to regard our extra-mural professional relationships is now a thing of the past. The apple cart has been upset. The whole problem needs re-thinking and a new approach.

Perhaps the one greatest single factor in the whole problem has been the wholesale shifting of our client load from the supervision of the private family agency to public relief, and the sudden thrusting into the interagency picture of a newly recruited, inadequately equipped, and constantly changing group of relief workers. Those of us who have worked long years to establish a satisfactory basis of intercommunication between agencies—and thought we had arrived at a reasonably adequate treatment of the problem—feel ourselves outraged when we study the inquiries that come to our desks in droves, as many times a day as the mail is delivered. “Mrs. So-and-So has applied to this office for help. She tells us that on July 15 she was treated in your emergency department for a fractured clavicle. Will you please send us diagnosis, prognosis, and doctor’s recommendation?” Or, one of the more popular printed forms: “We are referring the above-named client to you for a general medical examination, as there is unemployment in the family and they are unable to pay for it themselves. We would appreciate a diagnosis of his case.”

What has this done to our interpretive function? Are we labeled “uncooperative” if, with studied carelessness, we file these inquiries away without answering them? Do we fool ourselves into thinking that we are contributing to an intelligent understanding of the total health problem of the client if we answer them as honestly as we know how but without any real knowledge of the social situation or the personalities involved? Or have we decided to be as practical as the situation demands, and answer these routine inquiries in the perfunctory manner they deserve? Do we take a secret delight when we can pass over a situation quickly, though politely, by writing, “We are very sorry we cannot locate the records of your client. If you will send us more identifying information, we shall be glad to make another search.” Or, “Your client has not attended our clinics during the current year. We are, therefore, not in a position to give you any information that will help you with your present problem.” Being made of human fabric, are we succumbing to the pressure and becoming routine in our performance? At what point is it wise to pause and ask ourselves if we have made any attempt to influence or control the situation—if we are really making a professional contribution to community health?

To continue this line of thought, we might logically ask ourselves just how much information about our patients we are willing to divulge. This is certainly not a new problem in interagency relationships, but it has taken on a new emphasis during the present era of public relief. It presents new dangers to our professional integrity.

Suddenly one finds oneself faced with an army of new, constantly shifting, immature, albeit interested and eager, relief workers, most of whom have had no professional experience in the field of human behavior. How fair are we to our patients if we reveal to these people the intimate knowledge we have of them, without taking every precaution to eliminate the element of personal judgment and the projection of the worker’s personal bias into the picture? Is it not safer to encourage the more cumbersome and time-consuming

method of personal conference, and substitute a face-to-face relationship for the more impersonal written report? Will this widen the latitude of our discretion?

There is one other element in this relationship between relief worker and medical social worker that repeatedly forces itself upon our attention, and that is an attempt, both honest and sincere, on the part of either one, or both together, to meet the patient's need by somehow or other circumventing the organization's rulings. No, the relief agency will not sanction the purchase of hay fever serum, but if the relief worker will assume the rent bill for one month, the small earnings of Mr. Blank that were ordinarily put aside for this purpose can be released, and Mrs. Blank can pay for her own serum. Or the medical worker who learns from sad experience that eyeglasses cannot be had for the mere asking makes her request, not on the basis of sight deficiency and eye protection, but on the strength of the patient's suffering from headache, nausea, and dizziness. This capacity for "putting one over" is effectual, to be sure, but, in a sense, somewhat demeaning to those who would prefer to function with a more direct approach on a high level of professionalism. And highly contagious. One gets to read between the lines eventually. One knows what the relief worker means when she writes, "If your doctors want Johnny to have a special diet or an extra quart of milk, we will be glad to supply it." It raises an important question. How should the profession direct its approach to the problem? Should we concentrate our efforts on getting what we can, in any way we can, as the individual situation arises, or should we attempt to go back to the source whence the policies issue, in the hope of evolving a better understanding, more satisfactory machinery, and a more wholesome relationship?

Another rather regrettable relationship, it appears to me, is the position we are frequently placed in by patients, and also by physicians, of acting as buffer between client and relief worker. Our more intimate knowledge of the health implications in the social situation and the pressure under which relief workers function combine to create this rather unhealthy condition. Often the relief worker is forced to make sudden changes in the client's budget, without giving the client an opportunity to participate in the change and without adequate interpretation. Sometimes it is necessary for us to step into the picture. Always it is a temptation, but one that bears close watching.

Still one other important relationship on the case work level occurs to me. How much of our specialized knowledge and experience are we giving to public relief workers on individual situations that in no way touch our institutions and in which we have no concern? How much are we willing to lend ourselves in a consultative capacity? In my own community, a federal relief bureau has formed the habit of phoning for guidance whenever a health situation arises that is at all baffling. "Two young men have just registered in. They give a history of syphilis. Is it safe to keep them the night in the general shelter or should they have a separate apartment and have their dishes sterilized?" Or, "We have a young man in the shelter who goes around pointing his finger at automobiles and other inanimate objects and stands and argues with them. When they fail to argue back, he gets mad and kicks them. We are afraid to let this man mingle with the others. What can we do about it?"

These and similar requests show lack of information not only as to health resources but also as to methods of approach. Is the medical social worker in the private hospital taking on the function of health problem consultant to the community?

Aside from the case work basis, are we as a professional group, believing we have a definite contribution to make, beginning to think a little bit more in terms of masses as well as of individuals? Are we planning in terms of problems as well as of situations? Are we attempting to integrate our thinking into communal planning? Have we no place in public programs? Except in certain isolated communities, where the apparent success has been somewhat doubtful, how far have we been able to project ourselves into the organization of communal life? Experience has shown that invitations to participate on this basis are few and far between. Should we be taking the initiative or should we temper our eagerness with watchful waiting?

Closely allied to this problem, and tied up with it, is what I would call, for want of a better name, our professional teaching responsibilities. With governmentally paid physicians operating through their private offices, what chance is there for a careful integration of medical, social, and emotional factors into a unified program of rehabilitation, if the relief worker is not taught at least some fundamentals regarding the meaning of ill health, the social implications of disease, and the causal connection between physical disorders and social maladjustments. Probably this constitutes the greatest single contribution we could bring to the public relief field today. How far have we succeeded with it and what is to be our responsibility toward these new recruits?

Our teaching should go still farther, it seems to me. I think we should take every opportunity to participate in popular lecture series to hospital auxiliaries, to women's clubs, to junior leagues, and to other young peoples' organizations. Only in so far as we force ourselves to become articulate within our own communities will we be able to make our contribution to community health an effective one.

5. Why the Small Hospital Needs a Social Service Department; from the Standpoint of the Community, by *Michael M. Davis**

WHEN one visits a small hospital in a small community, one is always met with the statement, "Of course we can't do the things the big hospitals can afford; we haven't the money." And if you press the subject you are often met with the statement, "Social service is for the poor, and we don't have very many poor in this community." And if they are poor, some member of the family or their friends are always ready to take care of them. "We don't need any social service," they say. Now when superintendents or members of the board of trustees or of the medical staff talk thus, it seems to me that they largely miss the point. The small hospital does need social service, though not necessarily for charitable

* Adapted from *Tr. Am. Hosp. A.* 29:51-54, 1927.

reasons. I have been in communities where there really were no people who from the standpoint of charity needed social service because their few relief problems could be met without any great difficulty. But there were plenty of people in the hospital who needed social service; not because they were poor, but because of their home or occupational conditions. The patient needed readjustment to his work or to his home or to some new kind of work after he had had the breakdown which brought him to the hospital. Those are among the reasons why social service is important. So the hospital should be not merely a repair shop, but a link in the chain between a period of health that breaks down and a period of health that is fully restored.

You will recall the old story about a surgeon who did not see any use in "follow up" or social service, or "any of those things," and how one of his colleagues remarked to another, "Well, his grandfather smiled at sepsis, why shouldn't he smile at social service?" Circumstances tend to keep the specialist within the lines of his specialty, but hard lines are breaking down, and one can point out, even to a surgeon, how important it is to take the necessary steps to bridge the gap between the operated case that is ready to get out of bed and the operated case that is ready to take up the daily burdens of life.

That is an obvious gap, but the way of filling the gap is not always clear. Here is where the trained medical social worker comes in. One could multiply examples of the need for social service in children's work, in orthopedics, and in other kinds of medical work which are found in growing proportions in the smaller hospitals. In the small hospitals the bulk of the work is surgical, and the main interest of the hospital is in surgery. It is, therefore, necessary to build up recognition of the need for social service work in its relation to surgery to show how social service will help to deal with the personal and family problems which arise out of catastrophe, as the patient who enters the hospital for an operation is often concerned by such problems. I do not mean an automobile accident or being run over by a locomotive, but the sort of catastrophe that often follows an expensive operation.

The problem of financial readjustment may enter into social service. Its function is not primarily to give relief, but it may have to aid in financial adjustment of the family in meeting the burdens of sickness, or the burden which follows sickness, with the loss of family income during that period. Some families are able to meet that situation because they are clever or have friends; but when a family has not an unusual supply of funds, and no unusual supply of friends, it is not often able to deal with the kind of situation which faces it. When the mother is laid up for three or four weeks in a hospital and everything has gone to sixes and sevens in the home, including the temper of the father, and when savings are gone, there is a very difficult problem in that family when mother comes home. We can help to solve that problem, not necessarily by giving money, but by advising and scheming with the family in the process of financial readjustment and in the psychological situations which have arisen out of the financial difficulties caused by a prolonged stay in the hospital.

I have been trying to illustrate some of the bases upon which, perhaps, those interested

in persuading a small hospital to establish social service can work, some foundation upon which they can proceed to interest the hospital, its staff primarily, and its board second only because the board generally allows the advice of its favorite surgeon in introducing social service. The obstacles, of course, in introducing social service are three: (1) the fact that we never had it before; (2) the fact that it costs money; and (3) the fact that, even if we see the need and have the money, it is not easy to find just the person who knows how to do the job and is willing to come and do it for a "moderate" price.

The question of how to do it, of course, raises the question of organization, and it is there that I want to step over to the initial point that I raised, namely, the existence of the social service department. Such a question of organization within a hospital, or in any other institution, depends largely on its size. The bigger the institution, the more specialization you have in it. Now, in a large hospital it is obvious that you specialize your medical department and your surgical department into more divisions than you would in a hospital with thirty or forty beds, and it is obvious that you do the same thing with your administrative departments. Do you have a social service department when what you really possess is a single worker? Perhaps it is not desirable to have the weight of the word "department" descend upon the head of just one person. That is a question which you may have to answer in terms of how other groups feel about it. Sometimes calling one special person a department creates antagonism in itself, because such a designation for one person seems absurd to the other divisions of the hospital that involve many more people and much more money. Then there is the question of the degree to which the work can be specialized. One of the problems of the hospital in a community which has homes (not those small elaborated boxes that are called tenement houses) is the readjustment in the home. Where people live in tenements and apartment houses, sickness or convalescence in the home is much more difficult to take care of, whereas in a small community you have houses with space and neighbors who have some sense of neighborliness and are not only neighbors to most of the people who live within a radius of ten miles or so, but neighbors to all who may need their assistance.

In a large city you don't want to know the people on the floor above you because you hear too much of them without knowing them. In a small community, however, you have the possibility of enlisting the facilities of the home and the neighbors and friends; so it is easier to use the home for convalescent periods or other post-hospital adjustment than it is in a large city. That may mean the use of some paid person or unpaid friend who would go into the home to do household service or even to nurse. Often someone from the hospital or from the local visiting nurse association must help a family to arrange this, or must provide someone to do the work needed. In a small community there is less chance for specialization as between medical social workers and visiting nurses than in the large city. In the city we have a well-established specialization in which some agencies do general family adjustment and relief, and in which there is the distinctive assignment of work to agencies doing the visiting and public health nursing and to the social service departments of the

I have been in communities where there was just one welfare worker in a whole county, a county public health nurse who was combining in her one person all the jobs of a visiting nurses association, the public health nursing of the health department, and the follow-up and (perhaps) the social work of the hospital. Was that a bad combination? It might be a necessary combination to make, because circumstances might be such that it would be impracticable to have specialization between the follow-up and home service of the visiting nurse and the diagnosis of social needs, the "social treatment" from the social worker. I am not so sure it would not often be a good thing, if adequately trained people were available, to make that combination. This is one of the reasons why I am not sure that the small hospital does need a social service department. I am sure the small hospital needs some trained person on its own staff, or attached to it in some way, who can provide this link between the patient going out of the hospital bed and the patient who is restored to health and to community life. I am quite sure that the hospital, within its own walls, always needs to understand and deal with people in ways to which the trained medical social worker can contribute. Now, the supply of such workers is scanty, and it is particularly difficult to find those who are skilled public health nurses in addition. And when you do discover this unusual combination, can you induce the possessor to go to the small hospital in the small community?

Here enters another phase. How far will the medical staff itself enter into the medical social work with patients? It is true that in smaller hospitals you often find it most difficult to get the medical staff interested, yet, on the other hand, in small communities the members of the medical staff are less specialized than their professional brethren in large cities and are more likely to retain that idea of all-around service to the patient which we are told their grandparents always had. If you have a physician or a surgeon who has that family physician view and some knowledge and appreciation of the patient's home, then you may get done through the medical staff itself some of those things to which the staff will give no attention when they are cut off from broad contact with their patients and with the community.

In summary, the small hospital needs social service for the simple reason that the patient is the unit of application of the small hospital's effort, just as the patient is the unit of application of a hospital of a thousand beds. That is what the hospital is for, and you cannot split up a patient into a case for operating and a human being without having both the patient and the community lose. The small hospital needs the same essential functions as the large one, whatever differences they must have in organization.

We need to approach this subject with a very flexible mind. We should inquire how, in a small organization, certain functions can best be performed; how all hospital or community resources can be drawn upon to serve; how new traditions can be established in a community and how highly trained and efficient people can be secured to render the kinds of service which patients need. Let us think in terms of function and not so much of the habits and formulas of large institutions and large communities where everything is "departmented."

6. Why the Small Hospital Needs a Social Service Department; from the Standpoint of the Patient, *by Ruth Emerson**

THE prime consideration of the hospital is the care of the patient. On him are focused all its resources of personnel and equipment to restore him, so far as it is possible, to health, and to help him maintain health. The superintendent and medical staff are vitally concerned, therefore, with whatever may affect his treatment, so that we may approach this discussion of why the small hospital needs a social service department by an analysis of the patient's needs from a social point of view and by seeing in what ways the medical social worker can make it possible for the hospital to meet them. On the basis of such an analysis it should be clear whether or not the small hospital needs a social service department.

The small hospital, for the most part, is meeting the great need of persons living in small communities; often it serves a territory of several miles and offers the one haven for the sick in widely scattered districts. A fair proportion of its patients come from a distance, expect to remain a few days at most, have little or no knowledge of the duration of illness or its consequent period of convalescence, indeed may never before have been to a hospital, and have no understanding of its routine.

Even at the outset, before the patient is actually admitted, he often requires assistance to make it possible for him to remain in the hospital. The mother with acute abdominal symptoms who refused to enter the hospital until the social worker had telephoned the public health nurse in an adjacent town, thirty miles away, arranged with her to visit a neighbor and plan for the children to have their dinners with her daily and remain until their father should call for them in the evening, is not an isolated example of the family adjustments that illness frequently necessitates, and which must be made before the patient can begin his treatment.

Once the patient is in the hospital he is largely concerned with his present plight in terms of when he will get back to his accustomed duties—his interest in himself is primarily in relation to his own social environment, and only secondly is he interested in himself as a sick person. Many a patient revolves in his mind such disquieting thoughts as these: "I cannot afford to be off my job a week"; "I must go home tomorrow—the children cannot manage with Jim, who is only twelve"; "I do not believe the operation is necessary. I will wait until I am sick again. They say the doctors operate just to learn what's going on inside of you." He mutely asks the hospital to consider these questions which are upsetting to him but which he refrains from mentioning because to him they have no bearing upon his illness and are outside the field of the doctor or nurse.

Now, although he may see little relation between his worries about his job or his home and his illness, we know that they have direct bearing on it and that an appreciation of them is essential to his physician. In fact, the importance of such intimate understanding is stressed by physicians in both their practice and teaching.

In the hospital the patient often feels that he is in a foreign country where he does not

* Adapted from *Tr. Am. Hosp. A.* 29:55-62, 1927.

understand the language spoken around him, and where he thinks he cannot be understood. Often, too, neither he nor his family is articulate or appreciates the significance of much that to his doctor is both relevant and important. This is especially true of the kind of information on which the psychiatrist depends to reach his diagnosis and formulate his plan of treatment. The patient must, for the most part, therefore, depend on someone to give this picture of himself as a social being to his physician for him because even in the small hospital, where frequently he and his family are known, this friendliness and "general acquaintance" do not bespeak any accurate knowledge of the situation.

Two tendencies in modern medical practice are placing the patient in somewhat of a dilemma. On the one hand is the physician who wishes to know him in the setting of the work-a-day world, and on the other hand is the hospital organization which robs him of his individuality and personality and makes of him merely a "case." He is dependent on someone within the hospital's organization whose first responsibility is to him, and who, mindful that the man and the patient are identical, their interests one, will counteract the tendency of the hospital machinery to sever them. The medical social worker not only masters the machinery, but will, in addition, help to integrate the forces within the institution and have them centered on the patient, who, of himself, is helpless to cope with them.

If the need of the patient for the medical social worker is apparent at the time when he first enters the hospital, when the diagnosis is being established and a plan of treatment outlined, it becomes increasingly evident as treatment progresses. Let us next consider the problems which confront him in his undertaking to carry out the doctor's recommendations. Is he self-sufficient in this field? The physician of yesterday, who prescribed pills and powders, asked little of his patient, but the doctor who today prescribes a change in diet and rearrangement of one's daily regime calls for intelligent understanding, perseverance, and often for the surmounting of obstacles by his patient. The emphasis which is now placed on the part which the patient is to take in his own treatment is one of the striking changes in medical practice during the past decade.

Sometimes it is not only to the patient but also to his family that the interpretation of the hospital and the doctor's plan must be made. This was evident in the case of a young man who, because of severe diabetes, was a bed patient for several weeks, during which time his wife gladly went to work to help support their four children. When he was discharged, he was advised not to work, to continue his diet and insulin (which cost a considerable sum), and to report to a clinic. He followed instructions faithfully for several weeks, but one morning returned to the clinic looking wan and with sugar in his urine—the good work of weeks undone. He told the doctor that his wife believed that he was quite able to work and only shamming illness, that she said that it was his job, not hers, to support the family, and that she would not live with any man who would have cream for himself and let his wife cook special food for him and support him and the children. For several days, therefore, she had been making arrangements to place the children with relatives and to leave him to shift for himself. We can appreciate her point of view; she had no understanding of her

husband's condition or to what they might look forward if he kept to his diet and continued to gain in strength. A simple statement would not, of course, have sufficed. It was only after a considerable period that she did make her adjustment and the family life went on more tranquilly. The doctor, dietitian, and social worker all assisted in the interpretation and, through their understanding of both the patient and his wife, helped them to see life whole.

The patient who is discharged against the advice of a physician is often an indication of failure on the part of the institution to understand him and to meet his social needs. Frequently, he can be persuaded to remain if the real, not merely the apparent, reasons why he wishes to leave can be discovered and his objections can be met with a practical plan. All institutions attempt to do this, and when they fail it may be due to the way in which they sought to help the patient reveal his reasons and what lay back of them. Interviewing is an art and never more of an art than in relation to a sick, troubled hospital patient. The medical social worker may be expected to have skill in this art.

There are three questions which the patient always wishes answered but which he is seldom able to express for himself: "What is the expected outcome of this condition with treatment? What outcome must one be prepared to face without treatment? What are the absolute essentials in this treatment?" The answers to these questions form the basis on which the doctor, patient, and social worker meet. In this common understanding of the medical plan, obstacles which seem to the patient impossible to overcome may show up in clear perspective. Often a course can be charted which will steer around them, but usually this depends on the patient's having someone who will point out these obstacles to the physician in such a way as to prompt a modification of the original plan or lead to the outlining of a new course, or go more slowly than at first was suggested.

When the patient must surmount obstacles which lie outside his own character, he often needs assistance in reaching out and bending the resources of the community to meet his needs. A young man was discharged from a hospital and told to return weekly for special x-ray treatment and that after a few months he might go back to his work for a time. He lived with his wife and two children in a small, isolated town fifty miles away, had no savings, no means of transportation, and naturally saw no way to continue his treatment. Obviously, he needed the medical social worker, who helped him make and carry out a plan so that he might get his treatment.

Many times the general practitioner meets the needs of his patient; sometimes, nevertheless, he requires the specialist; in some situations, a practical nursing attendant suffices; in others, the skilled graduate nurse is needed; in some instances he can enable the patient and family to make the necessary adjustments; in others the social worker is needed.

Many times, adequate treatment of the patient involves the hospital in the health problems of his family. This is obvious in the field of communicable disease, but it is also of considerable importance in many other instances. A mother of three children was ill with pneumonia in the private ward of a small hospital for several weeks. Often her two boys, aged eight and ten, came to see her and were with her when her physician visited. Never

once did he inquire about the health of the boys, although one was a very obvious mouth breather, pale and undernourished, and the other had a marked scoliosis and strabismus. Had the doctor been interested in the general health problems of his patient, the children might have been under care months earlier and probably one of them would not have been out of school the next winter to have his adenoids and tonsils removed. While the patient is himself ill, he is more conscious of health values than he may be ever again, more eager for the health of his family and ready to talk and plan about it. It is always interesting to note how frequently the medical social worker who seeks to meet the medical social needs of the patient becomes involved in health problems of other members of his family. She has the opportunity to carry the hospital's ideals of health education for each patient and for the community beyond the bounds of the institution or the care of a single patient. Occasionally someone says that a small hospital with rural patients has little concern with the problems of diet and right living—"country air and farm food." A study of the hygiene of persons living in the country will, I believe, disprove this belief. It is no less the responsibility of the small hospital to teach the hygiene of right living than of the large institution, although it may be from a different angle. It may even be of more importance because frequently the small hospital stresses its relation to the community and assumes a place of leadership in health matters.

In hospital practice, as in social practice, the only sound way to approach the solution of any problem is through the careful study and analysis of the factors in it. On the basis of such a study one may build synthetically to solve the problem.

I leave with the individual small hospital the responsibility to study and analyze its problems from a medical-social viewpoint, and then to evolve a plan to meet them. The extent of these needs will vary with the individual institution, and depend in part upon the type of medical problem which it is treating and the resources of the community. It is in the way in which the small hospital meets these needs that it presents striking variations to the large hospital or the large out-patient clinic. Its problem is of the same quality, but the method of meeting it often must be very different—perhaps more difficult to evolve.

I am critical of those institutions which assume that they have met their social obligations to the patient by placing someone—anyone—in charge of social service, often in addition to other duties, and I would withhold from an institution the right to use the name "social service department" until it had a qualified medical social worker on its staff. There is no official registration of medical social workers as there is of doctors and nurses, but eligibility to active membership in the American Association of Hospital Social Workers¹ indicates that the individual has had both education and practice in medical social work. At present "social service department" is often only a label because its staff is not equipped to practice medical social service.

We must also face the fact that there are not today a sufficient number of medical social workers to meet the needs of all the hospitals of the country, nor is it likely that there will be in the next several years. Furthermore, although I believe that a medical social job can

¹ Now the American Association of Medical Social Workers.—Editor.

often be done in a small hospital by one person on less than a full-time basis, it is not sound to expect to secure the services of a medical worker on less than a full-time basis. A professional medical social worker who has studied the medical and social problems of the hospital and its community resources can often outline for an institution a safe procedure which will meet in some measure the most basic needs of the patient, physician, and institution and which will be a reasonably safe makeshift.

I quote from the report of the committee² appointed by the trustees of the American Hospital Association in 1920 to make a survey of medical social service:

The basis of hospital social service is its relation to the medical care of the patient. The restoration and maintenance of health depend in many instances not only on accurate diagnosis and direct medical treatment of pathological conditions of the body, but also upon dealing with the patient's personality, and upon the alteration or adjustment of his home conditions, occupations, habits, and community relations. The wise physician understands the connection of social and medical elements and seeks a knowledge of both before determining his final program for treatment. . . . The social worker is called upon to secure facts and to aid in interpreting them, in order to provide a basis for a plan of treatment which takes into account both the medical and the social elements. The social worker also aids in the carrying out of treatment. The merging of the social work with the medical work is essential to effective use of the social worker. Social treatment must have as its aim the promotion or accomplishment of the doctor's plan of treatment—a plan that has taken into consideration the personal and environmental elements as well as the medical. . . . The primary work of hospital social service, therefore, is work with individual patients. In this respect, the work corresponds to that of the medical service of the same institution.

Work with individual patients, whether by physician or social worker, is called class work; meaning that all the relevant facts (medical, social, or both) about the individual must be secured, analyzed, and interpreted as a basis for a diagnosis of the disease or problem, and a program for dealing with it. . . . It is hardly necessary to add that social case work with individual patients requires and implies knowledge of the patient's family and of its community relations.

No hospital can, in the opinion of the committee, be regarded as possessing a social service department unless the primary function of assistance in the medical care of the patient is practiced as one of the main activities of the department. The size of the department (whether one worker or twenty) has no bearing upon the judgment.

7. Why the Small Hospital Needs a Social Service Department; from the Standpoint of the Hospital Administrator, *by Nathaniel W. Faxon, M.D.**

DR. MORRIS RICHARDSON of Boston, beloved by all who knew him, often answered the query, "Why do you think this patient has appendicitis?" by saying, "Because he has ap-

² Report of the Committee Making a Survey of Hospital Social Service, *Bull. Am. Hosp. A.* 23:2-4, Nov. 1920.

* Adapted from *Tr. Am. Hosp. A.* 29:62-65, 1927.

pendicitis!" So I shall answer the question, "Why does the small hospital need a social service department?" by saying, "Because it does!" Realizing that such an answer will be unsatisfactory to the majority of people and especially to the trustees of a small hospital who might be considering the advisability of establishing such a department in their hospital, I will mention a few of the other reasons that might be advanced to amplify my original statement and perhaps to overcome the doubts of such a board.

It will be well first of all to define what is meant by a small hospital. So, for the purposes of this discussion, let us consider it to mean a hospital of approximately 100 beds. Of course all that may be said about the advisability of a hospital of this size having a social service department might apply to selected hospitals of smaller size. But in general, I believe that hospitals of less than 100 beds will need social service only to meet special conditions.

What does a social service department do and why can it do these things better than any other hospital department? If we can show that social service has a part to play in getting people well and that it can do its part better than anyone else, then there is real justification for a hospital social service.

1. *Obtaining Social History.* The basic work of a social service department is to obtain social data concerning patients in the hospital. The importance of such information in establishing a correct medical diagnosis and proper treatment is well understood and admitted. To be sure, this information might be obtained by the doctor himself, had he both inclination and time. The successful country and family doctor has done and still does it. But group medicine, specialized medicine, and hospitalized medicine, while gaining ground on the medical side, seem to have lost contact with this environmental and social side of the patient, which is so essential to treatment, prognosis, and even diagnosis. In hospitals, occasional individuals retain their interest in the social side of patients. Special service owes much to one of these. But experience has shown that aside from rare exceptions, doctors are too severely pressed by the demands of modern medicine to find time personally to gather social histories. Consequently it is not done unless by a social worker.

2. *Social Treatment.* Certain people who come to hospitals are found to be free from organic diseases and yet, since they are very much out of adjustment with their world, socially ill. In the country these patients are treated by the country doctor, who knows their family, their pet ills, their good and bad faults, as the saying goes, and who is the one person who can understandingly gather their medical and social histories and who must give both medical and social treatment. Before social service grew up, these medically sound but socially ill patients were a nuisance to hospital doctors and superintendents. They were nobody's business until social service assumed responsibility for their direction and care under the designation of "social treatment."

3. *Continuity of Treatment.* If lasting advantage is to be gained from a stay in a hospital, we must have a rational plan for the patient to follow after leaving the hospital and some means of finding out whether this plan is being carried out. This means a plan for continuity of treatment, home supervision, and follow-up. Of primary importance is the

fitting of patients, upon discharge from the hospital, into that place best suited for their care—a special hospital, a convalescent home, with some member of their own family or a friend, according to the needs of the individual patient. If sent home or to a friend's house, provision for bedside care, dressings, etc., and further supervision to see that things go as planned is often necessary. Lastly, intelligent follow-up for groups such as luetic, cardiac, tuberculous, etc., where the social problem is an important factor, is necessary unless relapses are to occur and work be done twice over.

It is pertinent here to consider why all this might not be done by the administration of the hospital. Of course it is done by the superintendents of many small hospitals. But in hospitals of 100 beds, the demands upon the time of the superintendent are such that this work usually is and will be slighted in favor of more pressing demands within the institution. Too often the patient is merely discharged as soon as he can safely leave the hospital, to look after himself as best he may. As for home care, if a visiting nurse association exists, the superintendent can report the case to them, hoping that they will carry on. As for finding the proper place for patients, the superintendent can find little time to visit, investigate, and evaluate the various places that might come under consideration, and so can only by hearsay fit patients and place together. To do such visiting and to make such evaluation are two of the duties of hospital social workers. As for follow-up, the administration can choose between doing the work in their own office, having a clerk in the record room do it, or having it supervised by the social service department. Experience will show that active follow-up, not end-result follow-up, is best done through social service.

I am sure, therefore, that a social service department will increase the efficiency of a hospital along these lines by doing the work better than it can be done by a busy and often harassed administration or by any other department of the hospital.

4. *Liaison*. Probably the most important function of social service is the liaison that it provides between administration, staff, community, and patient. Social service workers form a lay group with special training, having knowledge of the laws and resources of the community and a thorough understanding of all departments of the hospital and how they may be used to best advantage; they are conscious of the scientific viewpoint of modern medicine yet appreciate the real tenderness underneath the seemingly hard surface. They appreciate the need of administrative machinery and "red tape." All this on the one hand, and on the other an intimate understanding of the patient, his nationality, background, and probable reaction to hospital life and routine. Because they occupy a trusted neutral relation to both hospital and patient, they can fit these two together more understandingly and with advantage to both. In other words, a social department is a very effective lubricant to the many hospital wheels which often, lacking a drop of human kindness and understanding, squeak very loudly.

They also act as a connecting link between the hospital and the social agencies of the community. Relationship between such agencies and hospital administrations is often not as harmonious as might be wished. As usual, such antagonism is based upon ignorance or lack of appreciation of the other's point of view and a misunderstanding of what he is

trying to accomplish. Because the social service department is a part of the hospital, it has the confidence of the superintendent; because of its social training and work, it understands the ways and aims of social agencies and is of them. They are thus able to interpret the hospital and social agencies to each other with the usual result that they live happily together ever after.

5. *Economically.* Viewed from an economic standpoint, social service undoubtedly more than pays for itself, first, by lessening the length of the patient's stay in the hospital, thereby saving either the patient or hospital unnecessary expense. The average cost per day to care for a patient in a general hospital for those having acute medical and surgical diseases is around \$5. The cost of care for a convalescent patient in a private home is certainly less; the cost of care in a convalescent hospital or home is less; the cost of care of a chronic patient in a hospital for chronics is less. Consequently, the sooner a patient can be moved from an acute general hospital, the greater the gain to the community.

Social service plays an important part in the reduction of length of stay in hospitals. We all are familiar with the difficulties attending the proper placing of patients with tuberculosis, terminal cancer, cardiac disease, nephritis, and diabetes; and the orthopedic, the convalescent surgical and medical patients who have no home, and so on. The amount of work necessary and the length of time consumed are appalling even for a department bending a liberal part of its energies on these problems alone. How much more delay, if done by an administration having multitudinous other duties. (In a 100-bed hospital, if the social service could reduce the average stay in the hospital from 14 to 12 days, allowing an 80 per cent occupancy of beds, 347 more patients could be cared for. Or, put another way, each day that social service can save the hospital for the care of some free patients means approximately \$5; 400 days means \$2,000; 600 days means \$3,000; and so on. You can figure your social service department in dollars and cents as well as in other ways.) Second, through continuity of treatment, proper placing, and follow-up, relapses and consequent return to the hospital care are avoided. The saving here is so apparent that no further comment is necessary. All of this means economic gain to the community.

Social service, therefore, is an adjunct to the proper understanding, diagnosis, and treatment of patients. It is a development of modern medicine, grown up to meet the need occasioned by the change from family doctor to group medicine. It helps the hospital doctor to understand his patients. It aids the hospital superintendent in smoothing the strange pathways of hospital life. It directs the halting steps of those leaving the hospital toward returning health. It keeps those who work in hospitals, and who are so apt to fall into rigid monastic ways, in touch with the outside world and so more human and humane.

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CHAPTER XIV. CLINICAL AND PATHOLOGICAL LABORATORIES

I. Relationship of Hospital Management to the Hospital Laboratory, by I. David- sohn, M.D.*

THERE are specific problems in the relationship between the management of the hospital and the laboratories, different in many ways from the problems which arise between the administration and the other medical or administrative departments. This presentation is devoted to a discussion of some of these specific problems, to some reasons for their existence, and to a possible solution as I see it. In this discussion the term "laboratory" refers to the clinical and pathological laboratories and not to the x-ray department.

The department of clinical and pathological laboratories occupies a special position in relation to the management of the hospital. It constitutes a medical as well as an administrative unit. That is the basic reason for the existence of some difficulties. A proper consideration of that dual position is the only correct approach to the questions which I wish to present. As one of the medical divisions, the laboratory has problems in common with the other medical departments of the hospital. Their relationship is one of very close mutual interdependence. No medical division of the hospital, no matter of which specialty, and no individual member of the medical staff, can be without the aid of the laboratory. As an administrative unit, the laboratory has problems in common with other administrative departments of the hospital: for example, with the nursing, the dietary, the housekeeping, and the engineering departments. In addition to problems which the laboratory has in common with the medical departments on one hand and with the administrative and technical on the other, it has specific problems of its own due to its special tasks and to its special technique.

Before going further, we must agree upon a definition of the hospital clinical and pathological laboratory. Here is a concept of it, boiled down to six points, each bearing upon one of its functions. It is the department which helps the physician (1) to diagnose disease, (2) to follow the course of the disease, (3) to treat disease, (4) to ascertain causes of death and results of treatment by means of necropsies, (5) to take part in the teaching of interns, in the undergraduate and graduate teaching of nurses and of laboratory technicians, and to contribute in a good measure to the continuous graduate education of physicians, and (6) last, but not least, to help to advance medicine by means of research. Every one of these points would merit a detailed discussion, but that is not the purpose of this paper.

Here belongs one more definition. What is a pathologist? It is a physician whose chief interest lies in the diagnosis of disease and in the follow-up of its progress by laboratory methods.

* Adapted from *Hospitals* 13:44-48, Sept. 1939.

This functional concept of the hospital laboratory and the realization that the pathologist is primarily a member of the medical staff are essential when the relationship of the laboratory to the management of the hospital is considered. An agreement on these fundamentals will work for mutual understanding between the hospital administrator and the pathologist, particularly when all problems are considered from the viewpoint of the central and most important person in the hospital—the patient.

I am of the opinion that some of the difficulties that arise between the hospital management and the directors of laboratories are due to a lack of familiarity with the nature of laboratory work on the part of some hospital administrators. Nobody acquainted with the recent history of medicine will dispute that the laboratory has brought about, during the last forty years, revolutionary changes in the practice of medicine. This is due primarily to the introduction of methods and of instruments of precision for the examination of tissues, of secretions, and of excretions of the human body, and of its functions. The appreciation of the marvelous advances which we owe to this development has been centered on the instruments and not sufficient attention has been paid to those who are using the instruments, the pathologist and the technician. An instrument, no matter how precise, is valueless unless used properly. The laboratory employs exact methods and instruments of precision, but the human being that uses them is far from being equally precise, and not always inclined by nature to be equally exact.

To clarify the subject, I have attempted to reduce the work of the modern clinical and pathological laboratory to three fundamental principles: accuracy, speed, and economy. That the first principle must be accuracy ought to be easy to agree upon. Accuracy is what differentiates the work of the laboratory from clinical medicine. Accuracy of results is the reason for the reliance of the clinician upon the help of the laboratory. Methods and instruments of precision are only as accurate as the people who use them and they in turn require proper conditions to do accurate work. One of them is time. Good and reliable laboratory work cannot be done in a hurry. It is not the optically perfect microscope that is primarily responsible for good bacteriologic, hematologic, or pathologic diagnostic work—not even the eye that looks into it, but the brain behind the eye. There is a limit to the speed with which the eye can work, and a still narrower limit with which the brain can conceive and reason. Human beings differ in that respect and it is rarely the fastest laboratory worker who is most reliable. If we want dependable laboratory results, if we want reports on which the clinician may base conclusions that decide about the life or death of patients, then let us give the laboratory worker the necessary time. Another essential factor for good laboratory work is freedom from disturbances. It is very fortunate that we have learned to appreciate the significance of quiet for mental health in general. It is still more important for the quality of laboratory work. Crowded quarters, improper location, and all other conditions that generate noise must be eliminated.

I have referred already to the gap between the precision of the instrument and the exactness of the method on one hand and the natural imperfections of our senses and of our brain on the other. The innate shortcomings become still more pronounced when tiredness

and exhaustion are added. The elimination of haste, strain, and overwork is essential but not sufficient. Experience has taught us other ways to bridge the gap due to human frailty. The most important of them is constant checking. The hospital administrator may read at the end of the month in the report of the laboratory that so and so many basal metabolism tests were performed, but how many know that for a reliable result at least two and frequently three readings had to be performed? A hospital administrator may know how many calcium, cholesterol, or CO_2 determinations were performed in the laboratory during a month, but not all hospital administrators know that, unless these tests are carried out in large numbers, a conscientious technician actually does at least two or even three tests before one is reported. The additional two tests are on another sample of the same specimen and whenever possible a test on a known normal individual. The same holds true for all tests that are not done daily in sufficient numbers. How many hospital administrators appreciate how much time, thought, and labor are consumed in the preparation, the standardizing, and the frequent checking of reagents, solutions, standards, and stains, in the upkeep, cleaning, and checking of instruments? Reliable laboratory work is based upon these preparatory steps—but they do not figure in the monthly or annual reports to the superintendent.

The check by the laboratory worker himself is only one of the methods to eliminate errors. Another and much more important one, is the check by the laboratory director. His training and experience permit him to discover errors in technique that have been overlooked by the technician; his knowledge of clinical medicine enables him to find further inconsistencies by correlating the condition of the patient with the findings of the laboratory. It is a deplorable misconception on the part of some hospital administrators that laboratory work is just technique and that it can be reliably carried out by technicians alone. There is no technician, no matter how well educated and trained, who will remain good unless supervised by one who can, by virtue of his medical training in addition to his knowledge of technique, detect errors in the methods and in their applications. The supervision of the technique by the director of laboratories should not be confused with the interpretation of the laboratory report by him. That will be taken up later.

The work of the clinical and pathological laboratories is an applied science for the practical purpose of aiding the physician in the diagnosis and treatment of disease. That implies that the degree of accuracy is influenced by the practical consideration of clinical needs and of applicability. Our aim in the laboratory work is not always the absolute accuracy of the physicist or astronomer. To attempt to achieve it in all cases and without consideration of other circumstances may make laboratory work quite useless for practical application. For that reason, the degree of accuracy will be a resultant of at least two elements: (1) the essential correctness to make the laboratory report reliable, and (2) the time factor in relation to the condition of the patient, so as to give the patient the benefit of the test. The need for adjustment becomes readily apparent when one considers that the most accurate and correct laboratory report would be of little or no use if it could not be carried out in an emergency quickly enough to meet it.

That brings us to the second fundamental principle of laboratory work—speed. A certain measure of speed is an important factor in routine work. It is determined by the dynamic nature of disease, which presents problems that must be solved promptly. Still more pressing is the need for speed in emergencies. The importance of the laboratory becomes particularly manifest on such occasions. When life hangs by a thread, when the success or failure to save it depends upon the speed with which a laboratory test is carried out and upon its correctness, then does the laboratory show its mettle. To be ready for such emergencies, the laboratory staff must be organized accordingly—it must be ready to act at all hours of the day and night, and on holidays. One or several technicians must drop all that they do at the moment and carry out the task with the utmost of speed without sacrificing the required accuracy in the least.

Why is this of interest to the hospital administrator? Because he has to know that emergency examinations, while they must be completed in a fraction of the time that the same procedure would take normally, actually consume about three times as much time as normally because they require the collaboration of a team and the interruption of the normal routine, which has to be resumed subsequently or has to be attended to by others. That requires suitable provisions in the organization of the technical staff of the laboratory. Emergencies outside the regular laboratory hours can be handled efficiently only by proper organization. If emergencies are frequent, they will influence the expense budget of the laboratory.

I may be criticized for contradicting myself by having emphasized earlier in this paper the importance of ample time, and now by seeming to stress the need for speed to a degree that may be incompatible with accuracy. The contradiction is only apparent. The time is shortened by having all preparatory steps ready in advance, by the organization of an emergency team, and by having more than one technician carry out the work done usually by only one. To determine when, how much, and how some of the accuracy may be sacrificed for the sake of the needed speed without endangering the essential reliability of the result is another task that can be fulfilled safely by nobody but a medically trained laboratory director.

The third fundamental principle of laboratory work is dictated by considerations of economy. Economy of time, in the use of furniture, of equipment, and of supplies is essential not merely to save expenses but because waste is not compatible with accuracy and efficiency.

Efficient laboratory work is the result of a harmonious combination of the three factors: accuracy, speed, and economy. They are listed in the order of their significance. The essential accuracy is the most important of the three; it must never be sacrificed. Economy may occasionally be sacrificed to increase speed whenever the circumstances demand it, for instance in emergencies. There need be no conflict between the natural interest in economy on the part of the hospital administrator and the natural interest of the pathologist in efficient laboratory work, if the above principles are clearly understood and agreed upon. They are dictated by a consideration of the best interests of the patient.

In the light of the preceding thoughts, it will be relatively easy to discuss some further points of common interest to the hospital administrator and the pathologist. Questions of economy as well as of efficiency are involved in a point that is, to my mind, vital with regard to the handling of some emergencies in the laboratory, and which seems to have been disregarded entirely. Everybody will agree that the performance of a laboratory test in an emergency is a more difficult task than when the same procedure is done under normal conditions. The majority of the tests that are requested at night and on holidays are emergency procedures; otherwise they would not be needed at such unusual times. In laboratories in which there is no provision for the services of technicians outside regular laboratory hours, interns are expected to perform the requested examinations on such occasions. Generally, these interns spend from six to twelve weeks in the laboratories, a time too short to acquire the necessary skill, even when one assumes that they learned some laboratory procedures in medical school. Many a mishap can be traced to the failure of having a trained technician perform laboratory examinations on occasions when the demands on technique and judgment are unusually great. Dependence upon interns for laboratory work is frequently explained by the need of giving them opportunity to learn laboratory technique. Actually it is often prompted by the desire to economize. It seems a very dangerous economy. I do not wish to imply that interns cannot be taught to do laboratory tests well. Of course they can learn them, but in almost all laboratories, they do not stay long enough to do them independently without supervision and under the stress of emergencies. Often they are expected to do them almost on the first day of their laboratory period.

In view of the costliness of emergency examination, it would be in place to inquire how often these emergencies are true and bona fide. Everybody knows that it is not always the case. There is a group of them which I like to call pseudo-emergencies. The indication in these cases is not the precarious condition of the patient but the hurry of the doctor who likes to have all laboratory tests finished when he arrives in the hospital; or it may be that he wishes to save his patient's pocketbook and sends him into the hospital on the morning of the operation and wants to have all laboratory tests done in an hour or less prior to the operation. The patient's health is not served well by such economy. Sometimes other considerations of similar nature make haste necessary.

How to protect the hospital against such waste? There is only one way to do it. The pathologist must be enough of a clinician and of a diplomat to convince the physician on the case that he, the pathologist, is fully aware of the true indications for the emergency request. One or two persuasive talks on the wastefulness of the procedure will go a long way toward their reduction. If the hospital administrator expects the pathologist to stop that form of waste, he must see to it that the pathologist has enough time for it.

There is another form of abuse and waste which can be eliminated only by the pathologist with sufficient knowledge of clinical medicine in addition to the knowledge of his specialty and with enough time at his disposal. I have in mind the indiscriminate ordering of laboratory tests in hospitals with a flat rate charge. Only a pathologist with a consulting capacity can stem that form of abuse.

The equipment of the laboratory is a frequent subject of discussion between the hospital administration and the pathologist. My own attitude with regard to new equipment is expressed in a general way in the following statement: I do not wish to be the first to buy a piece of equipment of an entirely new type, but I prefer not to be the last one to do it. To wait too long with the acceptance of an improvement may be equally wasteful as to be too gullible to high-pressure salesmanship. Some new instruments are needed for the performance of new tests, some permit more accurate performance of older tests, some again introduce time and labor-saving devices. One can see how new and efficient equipment can serve to meet the three principles of laboratory work: accuracy, speed, and economy. Far be it from me to suggest that the hospital administrator ought to accept without questioning all requests of the pathologist for new equipment. I advocate merely that he have an open mind.

Quality in laboratory equipment needs special emphasis. Nothing is so wasteful as the use of inferior products. The more expensive of two pieces of equipment is often the more economical. Considerations that may be in place in some forms of business or industry are out of place in the pathological laboratory as they would be in the operating room. Where an error may affect human life, the best in quality that is conducive to eliminate errors is not too good. I shall quote only one example: It is well to realize that graduated glassware is not always graduated accurately; the degree of accuracy and the absence of errors are directly proportionate to the standards of the firms that manufacture and merchandise the product. Not all laboratories have the personnel that is needed to check every piece of graduated glassware that is bought. Therefore, the best protection is to buy graduated glassware of high grade. One could quote many examples of how wasteful it may be to buy equipment and supplies of inferior grade.

The accurate and reliable laboratory report is of no use to the physician or the patient unless it is properly interpreted. For a correct interpretation a thorough knowledge of laboratory medicine as well as of clinical medicine is needed. It constitutes the main task of the director of laboratories in his capacity as consultant in the specialty of clinical pathology and pathology.

I emphasized on several occasions that the pathologist must have enough time at his disposal if the hospital is to get the full benefit of his services. I did it advisedly because, in many instances that I am familiar with, the schedule of the pathologist is so crowded that it is humanly impossible for him to accomplish what is expected of him and do it well. I think that in the frequent discussions on the subject of the part-time or full-time pathologist, the importance of the time factor has not always been stressed sufficiently. The hospital administrator must make it clear to himself what the pathologist can do for the patients in the hospital and then figure out, with due consideration of the above, how much time that would require. It may be advisable to consult an experienced pathologist as to the time that would be required to cover the needs of the hospital for clinical and pathological laboratory work. The consultation with an experienced pathologist would be as helpful as a consultation with an authority on hospital construction on proper occasions. The hospital

administrator will then have arrived at the concept of what I call an "enough-time pathologist" and that is what every hospital needs, no matter how small. If some hospital administrator retorts that his hospital is too small or too poor and cannot afford the services of a pathologist, the answer is the same that would be natural if a hospital administrator says that his hospital cannot afford good food for its patients or adequate nursing or proper medication.

The hospital administrator ought to be familiar with the activities of two standardizing bodies: the American Board of Pathology and the Registry of Medical Technologists. The former certifies pathologists and thus aids trustees of hospitals and hospital administrators in the choice of qualified pathologists. The Registry of Medical Technologists of the American Society of Clinical Pathologists is wholly responsible for the improvement in the training of laboratory technicians in recent years and in that way has had a beneficial effect on the quality of laboratory work. The Registry works in close cooperation with the American Medical Association and with the American College of Surgeons. The schools of training are checked before they are found acceptable. The technicians who wish to become registered have to present evidence of having graduated from high school, of having completed at least two years of college work with a prescribed number of scientific courses, and of having completed a twelve-month course in medical technology in a recognized school under a recognized pathologist. They are then subjected to a rigorous written and oral examination. Those that pass are given a diploma which has to be renewed annually. The examiners are recognized pathologists, who give of their time without any compensation. There are at present about six thousand registered technicians. This process eliminates the unfit and helps to secure properly trained technicians.

I hope that the preceding discussion may contribute toward a better understanding of the problems of the pathological laboratory on the part of hospital administrators. Much credit is due to the American College of Hospital Administrators for contributing to the same end. The College is doing pioneer work by organizing courses in hospital administration with a consideration of the part of the clinical and pathological laboratories in the scheme of the hospital. There is good reason to believe that the laboratory has not reached as yet the peak of its development and that it will play an increasingly important part in the activities of the hospital. Its usefulness may be greatly enhanced by the help of hospital administrators, who have the opportunity to make the Boards of Trustees conscious of the fact that they have not discharged their obligation toward the patient until they have provided him with all the benefits that he can derive from a modern, efficient clinical and pathological laboratory.

2. The Laboratory of the Hospital and Out-Patient Department, *by E. L. Harmon, M.D.**

It is only natural that with the existence of the modern hospital it should have and has in large part become the place in which facilities for most types of laboratory service have

* Adapted from *Hospitals* 11:28-32, Dec. 1937.

been centralized. It is true that many physicians' offices are more or less completely equipped to render certain types of service within the given physician's field. The gastroenterologist, for example, will probably have in his office radiographic and fluoroscopic equipment, in addition to facilities for the performance of the more common microscopic and chemical analyses of gastric contents, blood, and body excretions. He will, in all probability, not be equipped to perform electrocardiograms, cystoscopies, or various other procedures unrelated to his specialty, the need for the performance of which he will frequently encounter in his patients.

The general practitioners, who still comprise about 56 per cent of all practicing physicians, are much too busy to be skilled in the performance of many intricate procedures, although they may be perfectly competent to treat the case after certain scientific determinations have been made. Furthermore, it would be financially impossible for them to be able to afford all of the various types of laboratory equipment and the skilled personnel necessary to their use in their offices.

With the growth and development of numerous hospitals as teaching centers operating in conjunction or affiliation with recognized schools of medicine, we find in them probably the greatest accumulation of laboratory equipment and facilities existing anywhere. There will be facilities for the performance of all the commonly required and routine types of service, as well as for procedures which are in process of being developed experimentally. From this type of center where laboratory facilities are most highly developed we can go through the complete range of hospitals as they exist today and find a surprising amount of available laboratory equipment, even in the smallest rural hospital. Furthermore, we will frequently be surprised to discover the amount of judicious use being made of such equipment. The hospital must of necessity be equipped to perform many types of laboratory examinations. A given item of equipment may be little used but it may be badly needed at any hour of the day or night for the care of a bed patient. Inasmuch as such equipment is necessary to the modern hospital, it would seem economically sound and advantageous to patient and physician alike to give this equipment maximum usefulness in the community, with as little duplication as possible of certain highly specialized types of equipment.

In speaking of the hospital laboratory I use the term generally to include all types of clinical and investigative services considered desirable or necessary today as adjuncts in the diagnosing and treating of the physician's patients. It will include everything from the simplest routine blood count, to the most complicated biochemical or tissue section study of which medical science is capable, to the x-ray laboratory and the metabolism and electrocardiographic services.

I should like to enter a plea for the more extensive and judicious use of whatever laboratory facilities the hospital affords the community, for the benefit of the doctor and patient alike. The question of the amount and type of laboratory examinations necessary for a given illness cannot be settled to any degree of satisfaction. In this the opinion of the attending physician must be the final determining factor in almost all instances. There are many laboratory examinations which are done routinely on all patients admitted to the

hospital. As a minimum, there will be commonly a complete blood count and hemoglobin determination and urine analysis including specific gravity, color, appearance, acidity or alkalinity, presence of sugar and albumen, and a microscopic examination of the sediment. This much is routine at most hospitals which attempt to qualify to the standards imposed by various medical organizations. These procedures have been found to reveal certain danger signs, often unsuspected but frequently shedding considerable light on the diagnosis or treatment of a case. Other procedures have become routine in many hospitals, such as the performance of blood Wassermanns or one of the other clinical laboratory tests for syphilis. The discovery of 18 cases with positive or questionable serology in a group of 110 individuals with no clinical symptoms, as was done at my own institution recently, justifies, in my opinion, routine blood serology. If the ratio of incidence of syphilis generally were only one-tenth of this, such a routine would still be justifiable from a community and public health standpoint. Further procedures of a more or less routine nature suggest themselves, such as bleeding and clotting times and blood typing with suitable donors readily accessible in certain types of surgical cases.

To hospital people the claim that the very rich and the very poor receive the best medical care has become an old story. If the facts were readily available I am afraid we should find this statement to be only too true. Those of us familiar with the operation of large out-patient departments in teaching institutions may sometimes think there is no end to the amount of expensive laboratory services our staff can use upon our clinic patients, often justified in the name of teaching or scientific thoroughness. And yet in our less hectic moments I am confident that none of us would have the temerity or wish to discourage the thoughtful ordering of many laboratory procedures by the clinician. The problem is to be as certain as possible that the request was thoughtfully made. We are willing to countenance a reasonable number of injudicious laboratory requests, if they do occur, to be on the safe side so far as the patient is concerned. One failure to take a skull x-ray in a case which later proves to have a skull fracture will do the hospital more harm in its community than the savings resulting from ten x-rays not taken in questionable cases will do it good.

If in our public wards and out-patient clinics increasing thoroughness in the use of laboratory facilities in diagnosis and treatment is justified, and I believe it to be, should the hospital not seriously consider ways of making the same services more readily available to the rank and file of the community? It is my firm opinion that much can be done in this area which will be of tremendous benefit to patient, physician, and hospital. Unfortunately, the problem boils down to an economic one. Nearly every hospital with which I am familiar has various types of expensive laboratory equipment available but used to only a small portion of its maximum usefulness. In the public and private voluntary hospitals this equipment has been provided through either public funds or private philanthropy for the use of the community the hospital serves.

We have all seen many instances of delayed recovery of a patient from some illness resulting from the false economy which kept the patient from the hospital or laboratory. A physician, who lacked the equipment necessary to perform the test in his own office or

whose patient was unwilling because of the expense involved to follow his physician's advice in obtaining the recommended determinations, has many times felt that the service would be desirable but not absolutely necessary. Perhaps in some instances he could call on a colleague whose office affords the needed equipment, and often the patient recovered from his complaint without benefit of physician or laboratory.

The first requisite is of course the assurance that all the laboratory services are competently directed, so that the physician himself trusts the information provided by the test. This implies more than a nominal medical director of the laboratory services with the technician free to conduct the laboratory as he sees fit. It requires the supervision by the best physician available to the hospital who will be in a position to come to the rescue when the technician encounters difficulty or gets beyond his depth. Technicians should be competent, reliable, and well trained. The equipment should be adequate for the various tests undertaken.

Dependent on the size of the hospital and its layout, there may be one central laboratory or the services will to some extent be departmentalized, with the clinical laboratory, the chemical, electrocardiographic, metabolism, and x-ray services all more or less separate units. The important factors, whatever the organization and location within the institution, are convenience and usability to all groups who are to be served. Some of the more expensive units such as x-ray, metabolism, and electrocardiography will serve the out-patient, the in or bed patient, and the private ambulatory groups from one central source. Lesser services such as blood counts, taking of Wassermann specimens, etc., will usually be in subsidiary space units in the out-patient department and on the hospital wards. Too much emphasis cannot be placed, however, on the convenient accessibility of the laboratories as a primary requisite to maximum usefulness.

The use of the various laboratories of the hospital by ambulatory patients should be encouraged. This should not be done in an effort to pay the hospital deficit with the resulting income. It should be as an accommodation to the staff and the public who support the hospital and at a charge which is reasonable for the service needed, and only on request of the physician.

If, as the trend seems to indicate, medical practice is going to rely increasingly on important adjunct services, the hospital should be the center to which both physician and patient look for such facilities. It is an economic loss for all if the hospital electrocardiograph is used only occasionally and some members of the staff are forced to equip their offices with electrocardiograph machines because the doctors' average patient cannot afford to pay the charge for this service at the hospital laboratory.

One doubts the soundness of the basis on which many of our hospital laboratory service charges have been made. Variations between hospitals on rates of charge for a particular laboratory procedure support such doubts. Little effort seems to have been made to determine laboratory procedure costs on anything except an exceedingly arbitrary basis. Even granting that something other than the hospital's need for money originally set the price for a given service, it stands to reason that the performance of a greater volume of such

tests will not increase the cost to the hospital in the same ratio if existing facilities are not used to capacity. It would accordingly seem worth while to give consideration to possibly lowering rather than raising rates of charge for special items as a means of extending the hospital laboratory's usefulness in the community.

3. Hospital Service and Laboratories, by *Nathaniel W. Faxon, M.D.**

THE admission of private patients and the introduction of laboratories into hospitals have also introduced financial and professional complications. The transition of hospitals in the United States from institutions which in the early days were solely for the care of the sick poor to institutions providing care for all classes in the community has been gradual but constant. In this way an evident economic need has been met in a democratic and efficient manner.

One hundred years ago there were no laboratories in hospitals. Today medicine requires laboratories in all hospitals. The last fifty years have seen the development of pathological, biochemical, and metabolism laboratories, x-ray and anesthesia departments, and similar diagnostic and therapeutic services requiring complicated, costly equipment and highly skilled medical and technical personnel for their operation. These laboratories and services have been developed in hospitals in response to the demand by physicians and patients that these aids to diagnosis and treatment be made available to them.

The change from a charity hospital to one including other classes in the community has complicated the formerly simple relationship of patient, doctor, and hospital. The development of laboratories with paid medical directors has introduced a further professional complication. Thinking doctors and hospital administrators confronted with these problems are seeking fundamental principles by which they may be guided in solving them.

The advent of hospital insurance plans has led to a request by some medical societies that x-rays, pathology, clinical laboratory, and anesthesia service should not be included in the benefits offered to subscribers, on the basis that they are not usually considered hospital service and that, as they often include professional service, to so include them would constitute the practice of medicine by the hospital. To support their contention that such services should not be included in hospital service they rely upon the report of the Bureau of Medical Economics to the House of Delegates of the American Medical Association at the 1937 Atlantic City Convention, which said: "If hospital service is limited to include only room accommodation such as bed, board, operating room, medicine, surgical dressings, and general nursing care, the distinction between hospital service and medical service will be clear." This appears to be a clear and simple statement, but is it? Are there not other services customarily provided by hospitals which are expected and accepted by physicians and patients alike?

The American College of Surgeons stipulates that a hospital must provide not only a competent staff but "diagnostic and therapeutic facilities under competent supervision—

* Adapted from *Hospitals* 12:11-14, Feb. 1938.

for the study, diagnosis, and treatment of patients, these to include at least, (a) a clinical laboratory providing chemical, bacteriological, serological and pathological services, (b) an x-ray department providing radiographic and fluoroscopic services."

In order that a hospital may properly instruct its interns, the American Medical Association requires that the following equipment be provided:

1. A clinical laboratory in charge of a pathologist of attainments and standing at least equal to those of other staff members.
2. A roentgen-ray department in charge of a roentgenologist whose attainments are at least equal to those of other staff members.
3. Equipment and facilities for and expert supervision, preferably by a staff member, over the administering of the usual kinds of anesthetics.
4. A working medical library in charge of a librarian.

These requirements of national organizations have been generally accepted by hospitals, physicians, and patients as essentials of a good hospital and thus it would seem that pathological and clinical laboratories, x-ray, and anesthesia services should be considered as integral parts of hospital service and are expected by doctors and patients. It is evident they result in better care of patients.

Hospitals usually classify patients as charity or ward patients, semi-private, and private. It has long been a principle of hospitals that medical and nursing care of patients should be the same for all classes, the distinction between them resting upon the basis of physical comforts, privacy, and more congenial surrounding and the payment or non-payment of a professional fee. If we accept the principle that laboratory service is a part of hospital service it is almost axiomatic that it should be available to all classes of patients.

One more point in regard to hospital service must be considered. Up to now only hospital service to the patient has been considered. It is clear, however, if one stops to think, that hospital service consists of two parts: service to the patient consisting of bed, board, medicine, surgical dressings, general nursing care and operating room, x-ray, pathology, anesthesia, and laboratory service; and service to the doctor such as the assistance of residents, interns, and secretaries, telephones, instruments, and apparatus provided without expense to him by the hospital, and laboratories with technicians wherein he may work or from which he may receive diagnostic assistance. Of course, many of these services overlap and it is hard to tell in many instances where service to the patient ends and service to the doctor begins. Some, like intern service, is beneficial to both doctor and patient, but it is clear that the doctor is receiving a great deal of help from the hospital; his time is conserved, he is saved the expense of instruments and apparatus and many other expenses which he would have to bear if practicing outside the hospital. But it all results in better care of patients.

In the charity wards it seemed clearly the duty of the hospital to make it as easy as possible for the doctor who gave of his time and skill. In order to provide equal facilities for the care of private patients, the same organization, the same equipment built up in the charity wards was naturally carried over. But the economic and professional relationship

of the private patient to the hospital and to the doctor became entirely different. Here the patient is expected to pay his way in full to the hospital and a professional fee to the doctor.

Relative to this matter of professional fees, it is generally the custom that the care of patients in the charity wards shall be shared in rotation by members of the staff and patients must accept the staff member on duty as their physician and that no professional fees be charged for this service. Semi-private and private patients may choose any member of the staff as their physician; the relationship in this case is obviously a very personal one and professional fees are charged in accordance with the financial status of the patient and the hospital accommodations occupied, and are paid directly to the doctor. If a consultant is called in he must be acceptable to both patient and physician and again the relationship is essentially a personal one.

But suppose, as is the case with almost all patients, that x-rays, pathological, or various laboratory examinations are needed, what then is the relationship of the roentgenologist or pathologist to the patient? Even though the request for such a service is in the nature of a consultation with the head of a laboratory service department it would seem that his relationship to the patient differs from that of a clinical physician or surgeon. The patient has no choice or selection but must accept the person appointed by the hospital. The department head may or may not see the patient. The laboratory report may be merely the transcription of a standardized examination performed by a technician which will be interpreted by the patient's physician. On the other hand, it may be the result of a careful professional interpretation by the department head—a real consultation. In most cases there is a combination of technical service provided by hospital paid technicians using hospital equipment under professional direction and also professional interpretation and service by a competently trained M.D. who receives compensation by some arrangement with the hospital for such services. Obviously a private patient should pay in some way a professional fee for this service.

In order to carry out these arrangements, the custom has grown up of using schedules of charges for x-rays, laboratory, and other services adjusted to meet the financial status of the different classes of patients. In computing this schedule the entire cost of the service is considered but is adjusted so that the charges to ward patients include only the cost of technical service while those to private patients include both technical and professional service. While it is possible in the case of private patients to separate this service into a charge for technical service to be paid to the hospital and a professional service to be paid to the department head, such a procedure leads to such obvious disadvantages that it has been discarded almost universally. First of all it would encourage physicians to request only the technical laboratory report which they would interpret themselves—a dangerous procedure in some instances and one which would break down the present desirable association between clinical and laboratory medicine. Secondly, it would be difficult if not impossible to carry out by such a separation the various arrangements made between hospitals and laboratory heads.

For instance, the rapid development of roentgenology has given rise to varied arrange-

ments between hospitals and roentgenologists, which have finally been crystallized in a set of *Principles of Relationship between Radiologists and Hospitals* and accepted by the American Hospital Association and the Radiological Inter-Society Committee representing the various roentgenological societies. Upon the subject under consideration these principles state, "Inasmuch as no one basis of financial arrangement between a hospital and its radiologist would seem to be applicable or suitable in all instances, that basis should be followed which would best meet the local situation. This may be on the basis of salary, commission, or privilege rental, but in no instance should either the hospital or the radiologist exploit the other or the patient." If a salary is paid by the hospital, to divide x-ray service into a charge for technical service and a charge for professional service, both to be collected by the hospital and distributed, is a clumsy way of doing what may be done better through one charge.

The payment of a salary to a member of a hospital staff is actuated by the desire of the hospital authorities to provide better care of patients by employing a competent physician, surgeon, pathologist, radiologist, or anesthetist who shall be responsible for the administration of his department and who in many instances is expected to give his whole time to the direction of his department, the care of patients, the teaching of students, and to investigation. As hospitals have grown in size, as medicine has become more complex, as teaching standards have risen, it has been realized that doctors, even though willing, could not accept the responsibilities set forth above and carry on a private practice which would return a satisfactory competence. The payment of a salary by the hospital, or often a combined salary paid by hospital and medical school for positions in teaching hospitals, has naturally resulted. Moreover, in certain departments, as for instance pathology and clinical laboratories, it has been recognized that the returns from professional fees were seldom adequate to attract men of ability, and that the only way in which hospitals could meet the requirements which they, the American Medical Association, and the College of Surgeons deemed reasonable was to guarantee through a salary a yearly income to those holding these positions.

What does all this amount to? We have tried to show that the admission of private patients and the development of laboratories have brought about new relationships between hospitals, patients, and physicians; that professional fees may be paid by private patients directly to physicians and surgeons or indirectly through salaries or commissions from charges made by hospitals for laboratory service, these charges including both technical and professional services; that salaries are a reasonable mechanism adopted by hospitals to attract competent doctors to departments which in some instances would not provide adequate professional fees; that the payment of salaries in all instances is activated by the desire to provide better care of the patient and greater security for the doctor; that hospital service includes service to both patient and doctor; and that it is unwise to try to separate technical laboratory service from professional laboratory service.

We can all agree, I think, that the primary objective of both hospitals and doctors is to provide the best possible care and treatment of patients. We can all agree, I think, that

the developments just named tend to do that. Why then must we try to separate these efforts into hospital service and medical service? As long as the patient benefits what difference does it make whether this benefit comes from hospital service or from medical service or, as is usually the case, from both? Is it not foolish to worry about where hospital service ends and medical or professional service begins, and whether or not the hospital is practicing medicine? In a sense, ever since hospitals selected doctors for a staff and assigned them to care for patients in their wards they have been practicing medicine and since this was so evidently for the benefit of patients it has been accepted as good. If a hospital goes a step further and, instead of exchanging renown and opportunity for free medical service, pays a salary to a physician, surgeon, roentgenologist, pathologist, or anesthetist in order to improve the care of patients through providing more efficient organization and direction, does this make it practice medicine? Or if it does is it iniquitous? It is held ethical for a number of doctors to associate themselves as a group clinic with the avowed purpose of producing better care of patients and with hope of gaining for themselves greater professional rewards. If this is so how can there be objection to a non-profit hospital which is an organization by which no individual or individuals may profit financially, arranging with doctors in various ways with or without salary or commission to serve upon its staff, provided that in no instance shall such arrangement exploit the hospital, the doctor, or the patient? This application of the Golden Rule is, I believe, the sword by which we may cut the Gordian Knot of controversy into which this consideration of hospital service, medical service, the practice of medicine, the division of technical and professional fees has become entangled.

In conclusion, let me submit these points:

1. That hospital service shall include every service that will result in better care of the patient. That it shall include service to the doctor as well as service to the patient. That it shall include specifically pathological, clinical laboratory, roentgenological, and anesthesia service.
2. That these and all departments shall be directed by qualified physicians.
3. That such services shall be available to all classes of patients, according to schedules adjusted to meet the financial status of the various hospital classifications of patients; such schedules to include the equivalent of a professional fee for semi-private and private patients but without such equivalent for charity patients. To accomplish this an accounting system should be installed which will show the cost to the hospital of maintenance and technical service.
4. That some equitable adjustment for services be made between hospital and physician and in determining this the character of the hospital should be taken into consideration and that no arrangement shall be made that will exploit the patient, the physician, or the hospital.
5. That in providing such services and by the payment of salaries or other methods of compensation hospitals are not violating medical ethics but are providing services expected and desired by physicians and patients and sanctioned by national medical organizations.

4. Necropsy Percentage in Relation to Hospital Professional Efficiency, *by Ludvig Hektoen, M.D.**

"NECROPSY percentage" means the percentage of deaths in which a necropsy is made; "hospital efficiency" means the efficiency with which a hospital carries on its primary functions, namely, caring for patients and promoting the growth and diffusion as well as the use of medical knowledge. Obviously, the significance of necropsy percentage in relation to efficiency will depend on the actual value the necropsy has today.

The value to medical progress of the necropsy stands forth clearly in medical history. By substituting observation for speculation, it was a potent means in driving dogma and fantasy out of medicine. In bringing to light the relation of structural changes to the clinical phenomena, it increased vastly the knowledge and understanding of disease, aided directly in the identification of diseases, and constituted the basis of physical diagnosis. It was the forerunner of the science of morbid anatomy, and became a faithful and indispensable handmaid to investigation and practice in all departments of medicine.

It is difficult to speculate reasonably on what the state of medical knowledge and practice might be at this moment if necropsies had not been made. In 1761, Morgagni published his great work on *The Seats and Causes of Diseases Investigated by Anatomy*, and it is only since then that postmortem examination has been made in a thorough manner on a large scale, and it is more recently still that it became established everywhere as an invaluable method for the study of diseases and injuries and for the control of diagnosis and treatment.

There are, of course, many and interesting indications that the value of the necropsy was understood much earlier than the time just stated. Francis Bacon (1561-1626) and van Helmont, the physician (1577-1644), urged that postmortem examinations be made. Little by little the keen interest in morbid anatomy of William Harvey (1578-1657) has been brought to light. Like a true pathologist, he said that more can be learned from the dissection of the body of one dead from a chronic malady like consumption than from the bodies of ten criminals. In an unpublished manuscript on medical anatomy or anatomy in relation to medicine, now lost, Harvey (so he says in a letter to John Riolan, Jr.) desired "to relate from the many dissections of persons diseased, worn out by serious and strange affections, how and in what way the internal organs were changed in their situation, size, structure, figure, consistency, and other sensible qualities from their natural forms and appearances and in what various and remarkable ways they were affected." This passage reveals that Harvey was one of that small but select band of physicians who faithfully follow their patients to the postmortem room. Glisson, too (1597-1677), was familiar with the idea of systematically comparing the organs in a series of bodies in order to find the lesions that invariably accompany a certain train of symptoms.

But what of the necropsy today? I shall discuss briefly the value of the necropsy to medical investigation, to medical education, to the physician, and to the community. These interests are so related that whatever helps one helps at the same time all the others.

* Adapted from *Mod. Hosp.* 22:491-493, May 1924.

Sometimes one hears the flimsy remark that the field of the human necropsy has been worked over so thoroughly that there is nothing left to discover by this simple means. Even if the structural characteristics of all human diseases, injuries, and anomalies at some distant future time were to be known and explained, the necropsy still would be essential in working out new methods of observation, of diagnosis, of treatment. In science, the explanation of one phenomenon "only uncovers new phenomena behind it that still demand explanation, in endless succession," and the day when the necropsy will not be needed in medical investigation is far, far away.

The necropsy has been belittled, too, because it reveals largely so-called terminal pathologic conditions. "Nothing is more foolish," said Celsus, "than to think that a man has been so in his life-time as he is found when he is dying or already dead"; and yet who will assert that the postmortem room is not a good place to study fully the earlier, even the earliest, stages of morbid processes as well as the later results? Always the necropsy will be a strong aid to investigation by contributing materials not otherwise easy to get, for study by anatomic, bacteriologic, chemical, or other methods. Frequently, conditions observed post-mortem, by suggesting definite problems or methods of attack, become the starting point of important work. The necropsy opens for the investigator secret chambers to which there is no other key. Finally, let it not be forgotten that the necropsy is a means to the study of the experiments made by nature everywhere with wonderful skill and ingenuity. It is shortsighted not to use such rich opportunities to learn.

That the necropsy is essential to the study of medicine will not be disputed. It is the only means by which objective, first-hand knowledge of the internal changes caused by disease and injury can be obtained. Without this knowledge, a rational general conception of the nature and course of disease cannot be acquired, and the true purpose and scope of diagnosis, of treatment, and of prognosis clearly understood. By comparing the conditions disclosed at necropsy with the phenomena observed during life, the physician controls his diagnosis and treatment, answers questions that arise, stimulates his interest in rational medicine, revives and expands his objective knowledge of disease, and increases the value of his services to the public. Without the educative stimulus of the necropsy, the mental picture of the changes at the seats of disease tends to become vague and shadowy, and the conception of the relation of these changes to the clinical manifestations tends to become imaginary rather than objective and real. The way the hospital staff thinks about necropsies is of real practical concern, because it affects the professional conduct and efficiency of every member.

In the degree in which the necropsy serves investigation and medical education, of student as well as physician, it also serves the public, which is the ultimate and chief beneficiary. But the necropsy serves the public also in special ways, notably as a means to determine the cause of death and to secure reliable data for the family history and statistics.

The necropsy is indispensable in all cases in which it is necessary to determine as fully as may be the cause of death. Here nothing can take its place. For this reason, law and custom sweep aside all objections when a necropsy is indicated for legal purposes. In medico-legal

work, the highest standards of completeness of examination and of reliability of observation are demanded because, in the effort to determine the causation of death, it is essential that no potential factor be overlooked or neglected. Frequently, the necropsy is of great value in showing conclusively that certain conditions, whether suspected or not, are not present in a given case.

Unfortunately, medico-legal necropsies not uncommonly are or have to be entrusted to inexperienced physicians whose work is incomplete and untrustworthy. The lack in most smaller cities of physicians competent to make a thorough and complete necropsy according to standard methods is, I believe, intimately connected with the lack of active interest in this kind of work on the part of most of our hospitals. I hold that in the nature of its functions the hospital should be a center for necropsies, and that if it fails to maintain interest and develop skill in necropsies, it also fails in a service it owes the public.

At this point it may be in order to say that the omission of a necropsy in the case of notable persons is regrettable for two reasons: (1) the loss of the influence that a necropsy in such a case will have on public opinion in regard to necropsies, and (2) the failure to use the best method available to determine the cause of death in historical personages.

For various reasons, the clinical diagnosis is subject to a not inconsiderable percentage of error. This is one reason why statistics may be faulty, and why questions of great interest, as for instance whether cancer is on the increase, cannot be answered definitely. The study of problems of heredity in disease suffers for the same reason. The principal remedy for these shortcomings is more and more thorough necropsies, and more use than is now made of postmortem diagnosis in statistics.

The great value to the family of accurate knowledge of the diseases and weaknesses of its members needs no elaboration. A most important but too much neglected source of such knowledge is the necropsy. In connection with this phase of the necropsy we should not overlook the fact that the main clinical diagnosis in a given case may be quite correct and yet the necropsy frequently discloses important associated conditions and lesions that otherwise would escape observation. Requests for a necropsy presented from the point of view of the family as here indicated seem to me to carry, as a rule, a special appeal to intelligent persons, and a special effort should be made always to report the results clearly and fully to those concerned.

Now, if the necropsy is essential for investigation, essential for the increase of medical knowledge, essential for the education of the medical student and intern, essential for the continuing education of the physician, and of great value to society in other ways as well, it follows directly and inevitably that the hospital which neglects the necropsy thereby limits its usefulness. Consequently, no words need be wasted in argument in favor of the proposition that necropsy percentage is an index of hospital efficiency.

The necropsy percentage of a hospital is a valuable indicator of its efficiency, and it should be taken into consideration in hospital rating. Every hospital should provide suitable places for keeping bodies, for making necropsies, and for burial preparation. Every hospital should do all it can as an organization to promote necropsies, and request for per-

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mission to make a necropsy should be made in all cases according to a definite plan in which the importance of the necropsy to the family and the community is emphasized. When a necropsy is held, those concerned should be informed fully of the results; complete records of all necropsies for purpose of study and statistics should be kept; the necropsy percentage should be determined from time to time; and, whenever possible, regular conferences for the presentation of clinical and pathologic observations and specimens should be held. Finally, repeated surveys of necropsies in the hospitals of a city or other convenient geographic subdivision, the results of which are published at suitable intervals, will be of great interest and value.

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CHAPTER XV. PHARMACY

I. Report of the Committee on Pharmacy of the American Hospital Association, 1937*

WITH the increase of proprietary preparations and drug specialties on the one hand and a general *laissez faire* attitude toward an intelligent policy of pharmacy service on the other, our Committee on Pharmacy of the American Hospital Association recommends that a thorough investigation be made to define rational drug therapy in hospitals, and that a manual of pharmacy operation be prepared for the guidance of the hospital field. The pharmacy service is of intimate concern to the doctor, the nurse, the pharmacist, and the administrator. Heretofore, pharmacy operation has been considered a technical matter for the expert. Present conditions warrant an economic and management approach. With such a manual in mind the remainder of this report will include, in brief, a discussion of those aspects of pharmacy operation which the Committee feels should be a part of such a publication.

To define our problem, a hospital pharmacy is that department of a hospital in connection with which, under the direction of competent registered pharmacists, drugs, medicines, and medical supplies are purchased, grown, or prepared; standardized, packaged, stored, inspected, dispensed, or distributed; including laboratory and research work, the keeping of necessary records, and the responsibility for poisonous, habit-forming, and dangerous drugs. Encompassing so broad a scope, it is illogical that effective operation can be expected without a definite policy and philosophy of operation and management.

One paramount question concerning the pharmacy policy is whether or not the hospital pharmacy should offer its services to other than patients and possibly employees in the hospital. This is, of course, debatable. Each hospital and each administrator must determine its policy on its individual merits. It may be of interest, however, to quote two personal opinions on the part of Committee members.

The hospital pharmacy should offer its services only to patients and employees of the hospital and to those directly connected with the institution of which it is a part; as for example, health service to students.

I do not consider that soda fountains, cigar stands, and sandwich shops are essential to drug stores, nor can I understand how the practice began of including these departments in the apothecary. Pharmacists are not qualified for this service; these departments have been instrumental in lowering the standards of pharmacists in general. For these reasons, I do not believe that in a hospital there is any real good reason for establishing a pharmacy except for the wants of the patient in dispensing drugs and sick room supplies. The hospital pharmacist should handle such items as syringes, sick room supplies, toilet articles, and similar prod-

* Adapted from *Tr. Am. Hosp. A.* 39:154-179, 1937.

ucts which will be required by the patients themselves. They should not, however, carry patent and proprietary medicines for general sale. If the hospital is contemplating offering a service to the patients and personnel consisting of food, drinks, and other restaurant items, this should probably come under the dietary department, being separate and distinct from the pharmacy.

Obviously, individual circumstances may warrant augmenting such a broad interpretation of community pharmacy policies without necessarily operating a "corner drug store."

In defining standards for the control and operation of a hospital pharmacy, the Committee desires to quote the principles of effective pharmacy operation as set up by Spease,¹ a leader in advocating better pharmacy policies for hospitals:

There is an urgent need for improving the pharmacy service in many hospitals, and to this end the following five principles constitute a Minimum Standard for a Hospital Pharmacy:

1. The hospital shall have pharmaceutical service: (a) the full time of a graduate registered pharmacist, or (b) pharmaceutical service from an approved nearby pharmacy.
2. The hospital shall appoint a pharmacy committee, which shall meet at regular intervals. The members of the committee shall be chosen from the several divisions of the medical staff. The pharmacist shall be a member of the committee and shall serve as its secretary. He shall keep a transcript of proceedings and forward a copy to the proper governing body of the hospital. The purposes of the pharmacy committee shall be: (a) to determine the policy of operation of the pharmacy, and to deal with such other matters of a pharmaceutical nature as may from time to time arise; (b) to add to and delete from the drugs used; (c) to supervise the purchase and issuance of drugs, chemicals, pharmaceutical preparations, biologicals, and professional supplies within the hospital.
3. The hospital shall maintain an adequate pharmaceutical reference library: (a) *United States Pharmacopoeia*, *National Formulary*, *New and Nonofficial Remedies*, *United States Dispensatory*, a medical dictionary, and reference works on inorganic, organic, and quantitative chemistry, pharmacology, toxicology, and bacteriology; (b) *The Journal of the American Medical Association*, *The Journal of the American Pharmaceutical Association*, *The Year Book of the American Pharmaceutical Association*, the federal regulations relative to the dispensing of alcohol and narcotics, and a copy of the state and municipal pharmacy laws and sanitary code.
4. The hospital shall use drugs, chemicals, and pharmaceutical preparations of at least *United States Pharmacopoeia*, *National Formulary*, and *New and Nonofficial Remedies* quality in the treatment of patients.
5. The pharmacist shall have immediate supervision over: (a) the routine preparation of injectible medication and the sterilization of all preparations he himself prepares; (b) the routine manufacture of pharmaceuticals; (c) the dispensing of drugs, chemicals, and pharmaceutical preparations; (d) the filling and labeling of all drug containers issued to nursing units from which medication is to be administered; (e) a semi-monthly inspection of all pharmaceutical

¹ Edward Spease, Minimum standards for a hospital pharmacy, *Hospitals* 10:73-76, June 1936.

supplies on nursing units; (f) the maintenance of an approved stock of antidotes in the emergency suite; (g) the dispensing of all narcotic drugs and a perpetual inventory of them; (h) specifications for purchase of all drugs, chemicals, and pharmaceutical preparations used in the treatment of patients; (i) specifications for purchase and storage of biologicals; (k) all operations wherein a special knowledge of pharmacy, including a ready knowledge of weights and measures in all systems, is necessary.

Hospital managements and medical staffs should give the subject of drug administration serious thought, and to insure the safety and efficiency of the pharmacy service, they should endeavor to comply as far as possible with the foregoing requirements.

In elaborating on these standards, it is the consensus of opinion of the Committee that any hospital larger than 100 beds warrants the employment of a registered pharmacist. This, naturally, applies to the general hospital or special institution for the acutely sick. An essential administrative principle is that each department must function as an integral part of a coordinated whole to operate in complete harmony and to preserve unity. The pharmacy is no exception; qualitative pharmacy performance is necessary. Unregistered or incompetent service should not be countenanced, not only because of legal complications but to insure absolute safety to the patient.

An active committee of pharmacy as an integral part of the medical staff organization could have a potent effect in the clinical and economic aspects of the hospital. The committee should be composed of active members of the staff, the pharmacist, and the superintendent. Leading pharmacists in the community may serve in an advisory capacity. The visiting staff is responsible for the professional performance of the hospital and as such should not only determine the policy of its pharmacy but set standards as to the types of preparations, sera, vaccines, mouth washes, et cetera, to be used on the wards of the hospital. Hospital directors, especially lay directors, cannot take the responsibility for advocating the specific contents of each patient's prescription or of refusing to provide specific agents when requested. They can, however, stimulate better research, better standards, and supply the committee with the results of successful experiments presented in regular bulletins and periodical reports. Hospitals should not be the place to try out proprietaries. On the contrary, continuous authorized research should be fostered to keep abreast of new drug combinations. In hospitals affiliated with medical schools, departments of pharmacology and materia medica should be represented on hospital staffs and should be asked to supply all colleagues in medical schools and affiliated hospitals with the scope and nomenclature of drugs, and enlist their cooperation in adherence to generally accepted drugs.

Many authorities recommend the use of the *United States Pharmacopoeia*, the *National Formulary*, and the *New and Nonofficial Remedies* as standard hospital formularies. Hospital authorities rather generally recommend the policy of adopting an individual hospital formulary. They advocate its many advantages. It can undoubtedly save the hospital money, can lighten the work of the pharmacist, and can furnish the interns and attending physicians a simple way of treating patients. Its major disadvantage is that it tends to dic-

tate medication to the doctors. When the formulary is adopted, except for unusual drugs, prescriptions should be written in accordance with it. The formulary should include prescriptions ample to cover all needs; its use should be insisted upon. Prescriptions should be written rather than ordered by numbers. This is one way to eliminate chances of error and to familiarize the intern with the practice of standard prescriptions. One hospital recommends putting a red star alongside each expensive formulary; many suggest pricing each prescription, which is an economic factor in both time and income. Price changes must be regularly revised. Medical changes and deletions likewise are necessary. The Committee recommends the distribution of the *Interns' Handbook*² as accepted practice in hospitals.

Hatcher and Stainsby of New York Hospital-Cornell University Medical School list the following rules in governing the admission of articles to the formulary.³

The formulary of the New York Hospital⁴ was prepared by a committee, which invited representatives of every department to present formulas desired for their departments. In every case where a complex formula or a proprietary preparation was desired the advocate of it was requested to present evidence of its superiority over the equivalent official preparation, and unless such evidence was submitted the committee declined to admit the article, or in a few cases, admitted it with the proviso that it would be deleted unless evidence was presented that would justify its retention in a subsequent edition of the formulary.

Rule I. Simple official (pharmacopoeial) substances will be admitted (when requested) unless they have become superfluous.

Rule II. No article will be admitted (except for controlled research) before its therapeutic value has been established.

Rule III. No article of secret composition will be admitted.

Rule IV. No article which is sold under a proprietary name will be admitted (except for controlled research) before its therapeutic value has been established.

Rule V. No mixture of two or more active substances will be admitted unless evidence is submitted that the mixture presents therapeutic advantages over the simple substances.

Rule VI. No proprietary article will be accepted before it has been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion in *New and Nonofficial Remedies*.

Rule VII. Requests for articles not included in the formulary of the hospital, but which are desired for use in controlled research which has been approved by the head of the department in which the investigation is to be conducted, will receive consideration by the Committee.

Rule VIII. It is the policy of the Committee to discourage the intravenous and intramuscular injection of substances which should be administered orally.

As indicated in the rules, this does not interfere with the therapeutic study of any proprietary preparation, nor does it prevent the use by any department in the hospital of any substance concerning the superiority of which the staff is so

² Philadelphia, Lippincott, 1929.

³ Robert A. Hatcher and Wendell J. Stainsby, The hospital formulary, *J.A.M.A.* 101:1802-1803, Dec. 2, 1933.

⁴ These rules could be adopted as an ideal set-up for drug selection.

firmly convinced that it is willing to conduct a scientific study of its uses, or to provide it at departmental expense. Since the publications of the formulary, the committee has continued to pass on the acceptability of various formulas and articles requested by the staff.

The committee could not have carried out its plans without the whole-hearted cooperation of the staff, and, with very few exceptions, the rulings of the committee have been accepted without protest after the whole subject had been discussed in considerable detail.

The use of the formulary has resulted in marked economy, but it is too early to determine the precise amount saved to the hospital. However, we are mainly interested in a system of rational therapeutics, and we believe that the use of official preparations is far more conducive to rational therapeutics than is the use of secret or semi-secret preparations, or of a great variety of preparations having nearly similar effects and differing only in dosage.

Every hospital should strive for a system of rational therapeutics. Economy is a factor in administration, yet secondary to the recovery of any patient. With the increased stress on proprietaries by the commercial houses, hospitals generally have found it necessary to insist on standard preparations. Not only is there a great abuse of proprietaries but there are many official drugs which have no place in a rationally operated pharmacy or therapeutic clinic.

Individual action toward a standard practice is not complicated and each pharmacy committee could well attack a few experiments at a time in cooperation with recognized laboratories and research clinics. Outside of the planned economy effected by such research it will add a definite stimulus and interest to the medical staff. Patience is a factor in adding proprietaries to this list of accepted drugs.

Essentials of good pharmacy planning take into consideration the type and size of the institution, case load and location, accessibility for patients, staff, and personnel. The physical pharmacy must have space for dispensing, manufacture, storage, and issuance. Space must be provided for adequate equipment to include fixtures, vaults, stoves, stills, shelves, drawers, closets, tables, refrigerator, sinks, and drain boards. Accessible space should also be provided to be used for records, filing prescriptions, price lists, catalogues, alcohol books, narcotic and alcohol forms, and other necessary data. Shelves and files for literature should be furnished.

The pharmacy itself should be a bright, pleasant room, more or less in plain sight, but not too accessible. It should be attractively furnished and well equipped. It should be clean and well ordered with stock kept fresh and up-to-date.

It is recommended that a standard check list be followed when planning pharmacy accommodations to insure adequate facilities. A pharmacy committee could well assume this important responsibility.

Mordell⁵ recommends that the same drug arrangement be carried out on each floor and

⁵ J. S. Mordell, Hospital pharmacy practice: an innovation, *J. Am. Pharm. A.* 24:50-54, Jan. 1935.

ward. This contributes to the efficiency of the individual nurse in meeting the same arrangement with each change of service. In addition to uniform arrangement and lay-out, a stock list is posted on each division.

Manufacturing is an essential feature of the pharmacy. With the privilege of non-tax alcohol, many economies can be effected. The Committee recommends that the manual include a list of formulas of these and other items. Where savings can be effected, hospitals should seriously consider the employment of additional personnel whose salaries can easily be absorbed with the savings derived in this way.

How far should the hospital pharmacy engage in manufacturing? E. F. Kelly, secretary of the American Pharmaceutical Association, states:

All drugs, medicines, and medical supplies should be manufactured or prepared in the pharmacy so far as is advisable and profitable, dependent upon the size and character of the institution—as has been said, “Much can be saved for even a small hospital by giving careful study to the medication that can be prepared by it. Unless the pharmacist has time for research or has a control laboratory at his command, he should not undertake the manufacture of products that should be analysed before use.”

With an estimated sum of approximately \$34,000,000 spent in the operation of hospital pharmacies there is an untold waste each year for drugs dispensed but never taken. From most every prescription of a dozen pills or eight ounces of medication, much is left unused. The pharmacy committee should check periodically with the pharmacist each prescription issued in the various departments to detect those responsible for over-ordering. This careful system of checking will cut the department cost immeasurably. Routine checking by the pharmacist of each nurse station should be made at least weekly of the drug inventory on hand. Careful checks should be made with each supervising nurse of the amounts of drugs and solutions ordered for each department. This procedure is to be recommended in place of the usual indiscriminate method employed of arbitrary “cutting” on the part of the pharmacist. Lectures should be given to student nurses on methods of requisitioning. Costs should also be included. Definite rules concerning requisitioning are aids in saving time and money. These rules should include standards, strengths, and amounts of solutions adapted for use. Types, sizes, and colors of bottles used for various kinds of drugs should be specified. A rigid system of administrative control should be installed. All direct and indirect expense should be charged directly to the department. This will show the exact cost of the department operation. It would be of interest if some fairly accurate mathematical measure or index could be devised to determine the efficiency of drug operation by which true comparisons could be made.

A system of requisitioning is essential. Accuracy in spelling names of drugs, abbreviations, and symbols used is necessary. Amounts of drugs needed must be specified. Signature and registration information must be stated if required by governmental regulation. Accurate records of inventory and issuance of narcotics and alcohol are essential. For spe-

cial requisitions where the signature of the resident or attending physician is required, care should be exercised that signature is that of the doctor in charge of the patient. Requisition and prescription may be made up in different colors for designation.

Patients are usually charged for special prescriptions, proprietaries, insulin, liver extracts, ampules, capsules, and other non-standard items. To insure accuracy, a definite system of charges must be arranged and checked. Requisitions must clear through floor, pharmacist, and cashier. The social service department or superintendent's office should check every requisition marked "free" for ward patients. Long lists of special charges are distasteful to patients and physicians should be encouraged to use standard drugs if possible. Daily records should be sent to the pharmacy of drugs administered by the floor and charges cleared with the cashier each day. Credit should be given upon the discharge or demise of the patient for unbroken packages.

Many expensive remedies have found a place in hospital therapy. Glucose, insulin, liver extracts, various types of sera, and other biologic preparations are costly. It is accepted practice to charge for such medications.

Good storing provides the following essentials: (a) knowledge of stock, quantity, position, and disposition; (b) flow of stock, creating maximum and minimum standards; (c) well-kept inventory records; (d) segregation of supplies as to perishables and nonperishables; (e) proper catalogues, to insure maximum efficiency in management; (f) knowledge of value.

The same fundamental principles apply in the purchase of pharmaceuticals and supplies as apply to other commodities. A well-correlated plan of purchase, receipt, inventory, and distribution is essential for good management. Some hospitals delegate purchasing of drugs to the pharmacist in cooperation with the purchasing department; many add the function of purchasing sick room supplies, hot water bottles, syringes, et cetera. The committee recommends that in institutions with a purchasing department such a department should control all purchases in it.

Hospitals should buy in bulk wherever possible to justify discounts. Purchases should be made on a competitive basis from only high-class and ethical firms. Quantity purchase is recommended with care given to drugs that may affect loss due to deterioration. The Committee recommends that hospitals not only take advantage of purchasing drugs through centralized agencies but that concerted effort be made to group individual commitments for drugs once or twice yearly. What would be the effect if all the hospitals in New York or Chicago pooled their purchases of several standard drugs from one ethical firm? Purchasing drugs in large quantities in competition works magic in reducing prices.

Some states furnish serum free for use in the care and treatment of the indigent. It is recommended for all states to follow this practice although the initiative must come from the hospital field. Irrespective of the source of the serum or the kind of patient for whom it is ordered, the policy should be in every hospital for such requisitions to be sent to the purchasing department or pharmacist for careful check. No telephone orders to outside

pharmacists should be permitted by individual physicians or floor nurses. No telephone orders for any drugs should be permitted.

Individual states have specific laws governing pharmacy control and regulation. Other regulations are federally controlled. Such jurisdiction usually requires standard editions of pharmacopoeia, issuing permits for licensing and registration, provides for inspection, regulates public practice, and specifies through various laws the procedure in purchasing and dispensing of poisons, narcotics, spirits, alcohol, et cetera. Such regulations must be strictly adhered to as infractions may lead to serious complications. The Committee recommends that the proposed manual of pharmacy practice contain a brief resume of all national and state laws directly applying to the hospital pharmacy.

Throughout this report, emphasis has been placed on the pharmacist, upon whom the success or failure of the department depends. The mere fact of proper legal credentials is not sufficient to measure effective performance. Intelligent, judicious, accurate, dependable, and seasoned service are barometers of sound management. The pharmacist should be directly responsible to the superintendent of the hospital. He should have the authority to contact the members of the staffs in the various departments for suggestions as to improving the pharmaceutical service. In each case, however, no change should be instituted without referral to the superintendent for approval. Hospitals should endeavor to provide for every possible safeguard to the patient and to the pharmacist. The Committee appreciates that no one job analysis pertaining to the duties of the pharmacist will apply in every instance. Each institution presents individual situations and problems. Pharmacy service under a competent, well-trained, progressive pharmacist will combine pharmaceutical and medical knowledge in bettering the drug therapy standards of the hospital and in bettering drug education of interns and nurses. It is this type of service which raises the level of drug therapy from its original function of mechanical issuance of drugs. Thus the term "drug room" will be removed from the nomenclature.

It is good management policy for each pharmacist to prepare a detailed job analysis of the operation of his department. Such job analysis should contain the routine daily operation of the department and rules and regulations pertaining to purchase and dispensing of drugs. If the pharmacist's duty includes the preparation of distilled water, ampules of magnesium sulphate, novocain, and other intravenous and subcutaneous solutions, complete details of such procedures should be noted. This is also true for the sterilization of flasks for normal and concentrated salt solutions. Where more than one person is employed, detailed duties of each position are listed. In small hospitals, the position of pharmacist may be combined with that of x-ray or laboratory technician. If so, full particulars concerning those duties should be kept in their respective departments. The major function of the job analysis is to record all functions in case an immediate change in personnel is necessary. The pharmacist contributes much to the terminal condition of the patient and his department service cannot be interrupted.

The role of modern pharmacy in hospitals specializing in the treatment of tuberculosis

and other communicable diseases is no less than that in general hospitals. These institutions draw more heavily on the pharmacy for biological preparations and the various vaccines and sera used in the prevention and treatment of disease. In the realm of serum therapy and sero-diagnosis, it would seem only the beginning has been made; the preparation, dispensing, and administration of all these items require the highest type of pharmaceutical skill. Pharmaceutical service can no longer rest content in a "cubby-hole" dispensing its armamentarium of epsom salts, compound cathartics, calomel, and quinine. No community or governmental agency should countenance any less degree of pharmacy service than medical service. What applies to the general field in economy, training, management, and control applies equally as forcibly to the special hospital.

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CHAPTER XVI. MEDICAL RECORDS

I. Hospital Case Records and Professional Standing Orders, *by Claude W. Munger, M.D.**

A MEDICAL examination is as well not done if it be not carefully, accurately, promptly, and permanently recorded." Such a statement sounds radical, but it probably approximates the opinions of persons who have made a careful study of medical records in hospitals.

Certain physicians have kept records of their cases from time immemorial. Many hospitals have files of excellent and complete information concerning patients treated decades ago. The management and the staffs of those hospitals, without any pressure from outside agencies, had recognized the value of complete records. It was in these institutions that the pioneer work in medical recording was done, and it was their experience that formed the basis for our present-day record systems.

In the majority of hospitals, however, the case records kept prior to about 1916 were scarcely worth preserving. It was the hospital standardization program of the American College of Surgeons that first focused the attention of all hospitals upon the importance of the preparation and preservation of detailed information concerning their work with the sick. Previous to the inauguration of this program, the efficiency of the physicians and their medical service in the hospital could be gauged by the type of medical records kept. Records are still a measuring rod of medical efficiency in hospitals, but to a lesser degree than formerly. This is because all institutions of any importance have striven to comply with the requirements of the American College of Surgeons, and in some hospitals the administration has, in doing so, kept records up to a higher standard than their medical staffs were prepared to appreciate or utilize. This is the only fault, in my opinion, in this tremendously helpful work. The fact is that failure to gain approval by the College falls much more heavily upon the hospital than upon the individual physicians on its staff. If the program could have exerted more pressure directly upon the staff physician, the result would have been even better.

Why have our leading physicians and hospital administrators considered medical records important? What is the value of records from the points of view of the patient, the physician, the hospital, and humanity in general? Answers to these questions were more necessary twenty years ago than now.¹ In spite of the general recognition of the value of properly managed case record systems, it seems wise to outline, for the student, the principal points.

The development of specialization in medicine, with, in hospital practice, as many as half a dozen or more physicians consulting on the same case, has entirely done away with

* Adapted from *Mod. Hosp.* 30:99-106, Apr. 1928.

¹ The reader should remember that this article was written in 1928.—Editors.

the old idea that the memory of the attending physician was the only record necessary. The greatest use for medical records is while the patient is undergoing treatment in the hospital. With every procedure recorded, a complete picture of the patient's case is available to attending, consultant, intern, and nurse alike. Faulty memories will not jeopardize the patient's welfare. Prolonged recitation of history and symptoms by one physician to another is no longer necessary. The record is there, and if it is a good one, it tells a complete story of the case from admission to discharge.

Medical records are extremely useful in connection with subsequent admission of the patient to the same hospital. The former record often contains information much more helpful to the physician than any knowledge which the patient has concerning his past condition. It is the custom also, if a patient has been previously in some other hospital for the hospital to which he is later admitted to apply to the former for a transcript of his record.

Without proper case records there can be no compilation of valuable medical statistics for hospitals or groups of hospitals. Monthly and annual compilation of information obtainable from medical records is an excellent check upon the efficiency of the hospital as a whole, and of the individual physicians treating patients.

The prime purpose of the record is, of course, to benefit the patient medically. The patient, however, is safeguarded legally in many instances. For example, subpoena of the record enables any court to obtain a true statement concerning the patient's care and treatment in connection with insurance claims, employees' liability claims, suits for damages and malpractice.

The case record is of tremendous importance in safeguarding the hospital against persons who, through ignorance or design, may bring unjust legal suits against it. The doctor, likewise, is safeguarded in unjust suits or accusations on the part of the patient or anyone else.

Teaching of medicine is expedited through the use of medical records, current and past. There is no more effective teaching method than the citing of cases illustrating the point under consideration. Record keeping is instructive to the attending physician and especially to the hospital intern, for in order to write a proper record the doctor must think the case through sufficiently to impress it upon his memory, and thus adds to his store of knowledge. The part which the nurse plays in record keeping teaches her the importance of accuracy and clear thinking in connection with her work.

The record of the patient's past illnesses often means a saving in money to him, because it obviates the repetition of numerous expensive examinations, tests, and other procedures.

The modern methods of medical research depend primarily upon records. Except in the case of a few startling and accidental discoveries, most of the advancement in medicine has come through painstaking study of past experiences in connection with the disease under consideration. It is frequently possible to prove the truth or the fallacy of medical hypotheses through compilation of the information contained in past records. This can best be done through the medium of hospital case records.

It might be well to interpolate here the statement that in most hospitals the preparation of medical records is superior to the utilization which is made of the records after they have been prepared. The physician or the hospital failing to take advantage of the knowledge obtainable from these records is missing a golden opportunity, not only to improve individual results, but to make some real contribution to knowledge.

What is a patient's record? What does it include and how is the record made? Records regarding patients actually in the hospital are ordinarily kept adjacent to the ward or room during the patient's stay, and are then permanently filed in the medical record department. The bedside record includes the following: (1) notes by physicians regarding patient's condition upon admission; progress notes; (2) records of special diagnostic tests; (3) records of special treatments; (4) records of important nursing procedures and the nurse's reports regarding the patient's daily condition; (5) notes regarding the patient's diet; (6) special permits and authorizations. In addition, there are occasionally certain other records which become a part of the patient's chart.

The physician's clinical notes contain a complete and detailed medical history and a physical examination done soon after admission. Preceding these, many hospitals have also an admitting room note recorded by the physician receiving new patients. The admitting room physician makes a tentative diagnosis. The physicians in charge of the patient on the ward, after they have given the case a thorough preliminary study, record a provisional diagnosis or diagnoses. The attending or intern, or both, makes progress notes from day to day. A final note summing up the condition of the patient is made by one of these after the discharge or death of the patient, and at the end of this note the final diagnosis is recorded.

The mechanics of recording physicians' clinical notes varies in different hospitals. It is seldom that the attending physician can devote sufficient time to write the record in long-hand. The more usual plan is for the intern to make a history and physical examination, these notes to be checked at the bedside by the attending on his first visit, and a final draft recorded as soon as possible by the intern. Even the intern, if he is on a busy service, finds all this paper work onerous, and the hospital can expedite its record keeping if it provides a sufficient number of stenographers capable of taking medical dictation and transcribing these clinical notes on the typewriter. Dictaphones are used in some institutions, but the writer does not consider them especially successful. Stenographic service in recording surgical operations makes complete notes possible.

It is important that the medical record be complete, but not so brief as to omit facts that may later be of importance. It is customary for hospitals to devise skeleton forms for history taking in the various medical divisions. As a general custom, the plan of developing complicated blank forms for the intern to fill out is not recommended. It is applicable in certain specialties such as obstetrics, but usually the plan is unwieldy. It is sometimes convenient to have a skeleton outline of history and physical examination printed in small type in the upper right-hand corner of the history sheet. This serves as a guide for new interns or for clinical clerks who are performing these services.

When the final diagnosis has been determined at the end of the patient's stay, it is necessary that this diagnosis be so worded and numbered as to conform to the diagnosis nomenclature adopted by the hospital.

The enforcement of frequent writing of progress notes is always a problem in hospitals and only constant attention by the resident and attending physicians can guarantee that the clinical record will tell an unabridged story of the case.

There are numerous methods of recording physicians' orders. Probably the most common is the use of a doctors' order book into which the date is inserted each day, orders written that day following the date. According to this plan, the nurse then copies these orders on an "order sheet" which is kept on the patient's chart. For legal purposes, the order books with original signatures must be preserved. This "order sheet" indicates the date of institution of an order, with a space for the date of cancellation. Other hospitals have the doctors write their orders directly upon the "order sheet," thus preserving the original signature with the patient's record. This is a safe method from the point of view of future legal complications, but adds greatly to the work of the nurse who must look through every chart several times a day to see if orders have been written. Still another plan requires writing of the order direct upon the "order sheet," which, however, is not placed upon the patient's chart, but is kept in a separate looseleaf binder until the patient's discharge, when it is attached to the chart.

The principal special diagnostic tests are those done by the laboratory, the x-ray, electrocardiograph, and metabolism departments. Some institutions use a separate sheet for each examination of the above nature. The result of the test is recorded on this sheet, and it is sent to the ward and attached to the chart as soon as possible. This plan is satisfactory for records of x-ray examinations, but is difficult for laboratory work. The many laboratory tests required in modern medicine add greatly to the bulk of the chart if separate sheets are used for each test. It is usually better to use laboratory sheets on the charts with multiple spaces for recording each of the commoner tests. A clerk or other laboratory employee makes the rounds of the wards daily, recording on the charts results of tests. It is of considerable importance that the final recording of any special test be done by a person familiar with the work of that department. Dependence upon the ward nurses for this copying service is likely to lead to inaccuracy.

It is also necessary to work out arrangements for reporting electrocardiographic examinations, metabolism tests, and other diagnostic procedures. Needless to say, all of these special departments must keep complete record systems on their own account, of all work done by them.

With regard to the recording of special treatments, conditions similar to those existing with diagnostic tests pertain. Prompt and accurate recording of x-ray and physical therapy treatments and occupational therapy work is essential.

An important part of the duties of the ward nurses is the careful and accurate recording of temperature, pulse, and respiration of patients on the special sheets that are invariably provided for this purpose. The head nurse or her assistant is also responsible for entering

daily notes concerning the appearance, actions, symptoms, complaints, and general condition of patients under her care. Records of this nature are made by both day and night nurses. The nurse also records the administration of all medicines, and a record is also kept of excreta and special nursing procedures, such as enemas and catheterizations.

In cases not presenting special dietary problems, it is customary for the nurse to note such matters as abnormalities of appetite and refusal of food. In diabetes, nephritis, and the many other conditions requiring specially prepared or calculated diets, it is desirable that a special diet sheet be inserted in the chart with daily notes from the dietary department.

The development of record keeping in the hospital has necessitated the employment of a trained person, variously called "record librarian," "historian," "statistician." This position requires a person with considerable education and general ability, a clear understanding of medical terms, ideals in medical record keeping, and a grasp of the significance of the various professional procedures used in the treatment of patients in hospitals. A thorough knowledge of filing and statistics is also essential. Practical courses have, from time to time, been offered by hospitals to persons with sufficient preliminary preparation to give promise of success in this specialized work. Such representative institutions as Bellevue and Presbyterian Hospitals, New York, Massachusetts General Hospital, Boston, and Mount Sinai Hospital, Cleveland, were of pioneer assistance to the hospital field in this connection. D. M. Trotter worked out a successful course for record librarians at the Blodgett Memorial Hospital, Grand Rapids, Mich., as early as 1920. The American College of Surgeons has offered valuable assistance and advice in record room work.²

A successful hospital record system depends mainly upon two factors, namely, careful attention to records by attending and resident doctors and a well-trained and conscientious record room staff. Proper transcription of clinical notes by stenographers in the record room is essential to the usefulness of the chart on the ward. Successful use of the chart after the discharge of the patient depends entirely upon record room efficiency.

Upon discharge of the patient and completion of his record by the physicians, which later should include signing of the record by either the attending physician or the chief resident, the chart is carefully studied by the record room staff. Rearrangement of pages is usually necessary so as to maintain a proper sequence of the various types of records in all charts. The record librarian also makes an extra check of the record following that of the resident physician, to make certain that all reports are recorded and that the record truthfully tells a full story of the case.

Many details of the record are then analyzed and data entered on trial sheets from which monthly and annual reports are compiled. Soon after the end of the month the record department is thus able to issue a monthly report of medical performance, which provides

² The Association of Record Librarians of North America has developed curricula and standards for such courses. It now inspects, approves, and gives general supervision to these efforts, and its approved courses are maintained in a number of hospitals. The same association registers record librarians whose qualifications meet its standards; such persons are permitted to use the title R.R.L.—Registered Record Librarian.—C. W. Munger.

sufficient detail to give all concerned a clear picture of the medical accomplishments or shortcomings of the hospital. This report contains analyses of civil data, analyses of results including details regarding patients whose condition is unimproved or who have died, information concerning consultations, transfers, and releases.

The record department is also able to compile statistics of value to the hospital and its staff concerning results of treatment obtained by individual physicians. Such records kept over a long period are of assistance in judging relative ability of the staff members, and should be considered when reappointments or promotions are to be made.

The record is then filed. The more approved systems include alphabetical cross filing of the record according to the name of the patient, cross filing according to principal diagnosis, according to secondary diagnoses, according to surgical procedures, and sometimes according to other special procedures, such as electrocardiograph and x-ray therapy. Cross filing of medical records requires the use of the same nomenclature by all persons writing diagnoses in the hospital. The hospital must devise its own nomenclature or use one of the standard published ones.³

The record itself is, in some institutions, filed in a separate folder; in others, it is bound in a permanent volume with other records. In my opinion, single unit filing of charts is preferable, since it permits assembling of records into groups according to any classification or problem. Records bound into permanent volumes necessitate frequent handling of large volumes in order to examine possibly one or two records pertaining to the subject in question which they may contain.

Charts may be filed in stacks such as are used in libraries, although fireproof and dust-proof metal cabinets are to be preferred. Record rooms should be so designed as to accommodate an accumulation of the records of four or five years. Additional fireproof space should be provided in the basement or elsewhere for the older records, which should, however, be accessible. In nonfireproof buildings all record room files should be housed in fireproof vaults.

Much of this detailed record work is in vain unless the records are actually used. Where it is possible, the person in charge of records should be relieved of enough of the routine work to be free to study and use the records, in addition to the issuance of monthly and annual reports. The record librarian should be available for compilation from the records of special information required by the staff or by the management of the hospital. She should be encouraged to study special problems; she should be called upon to assist in the preparation of scientific articles, and to assemble groups of patients' records for various uses; she should be able to cooperate in connection with any medical research that is in progress, and she should prepare such graphic charts as will give clearer pictures of various phases of the medical work.

The medical library is found in many institutions in connection with the record depart-

³ The *Standard Classified Nomenclature of Disease* (Chicago, American Medical Association, 1937) is now widely used, and the former custom of large hospitals to devise and follow their own systems of nomenclature has fallen into relative disuse.—C. W. Munger.

ment or, as the latter might be called, the library of case records. The size of the library will, of course, depend upon available resources. It should certainly have a good collection of modern textbooks of medicine with as many specialized volumes and monographs as are procurable. A considerable part of the annual budget for the library should be put into current medical journals. If comfortable reading rooms and good library service are available, the physicians will take advantage of them and the work of the institution will most certainly be favorably affected.

Efficient hospital administration and economy are impossible without thorough correlation of basic orders, customs, and methods throughout the institution. Hospital practice is so detailed and complicated, and methods necessarily differ so greatly, that there can be no concerted effort unless the fundamentals of the medical work are outlined in printed form. Printed editions of these customs or "professional standing orders" have been issued by many hospitals, but unfortunately by fewer than the necessity indicates. In one instance, the three hospitals of a medium sized city were able to meet and formulate a single order book applicable to all three. This meant slight sacrifices by the individual institutions, but it has proved helpful, inasmuch as there was marked overlapping of medical staffs and there had been confusion because of varying methods in the hospitals. Standardization of hospital orders beyond this seems inadvisable at the present time. A set of standard orders that would fit all hospitals would have to sacrifice so much of its detail as to be practically useless. Differences in aim, type of work, location, and internal organization will always exist and will probably preclude complete correlation.

The preparation of a book of standing orders requires long and careful consideration by a group representing attending staff, resident staff, the administration, the nursing department, the special diagnostic, special therapeutic, and dietary departments. It is helpful to select standing order books of several good hospitals and use them as guides in the work. This task must of necessity cover quite a long period because the orders will need to be rewritten a number of times in order to satisfy all factions and avoid errors. Some of the logical divisions of a standing order book may be outlined as follows:

- I. General orders, which pertain to patients on all services: a) admission routine, b) ward routine, c) order book routine, d) specimen routine, e) nourishment routine, f) x-ray preparations routine
- II. Surgical orders: a) preoperative routine, b) operating room technique, c) post-operative routine
- III. Care of transmissible diseases; these must be detailed and are essential whether or not the hospital maintains a communicable disease service
- IV. Obstetrical and nursery routine in detail
- V. Eye, ear, nose, and throat
- VI. Internal medicine (special subdivisions for the principal diseases)
- VII. Pediatrics
- VIII. Neuropsychiatry
- IX. Emergency room procedures
- X. Miscellaneous

The book should be carefully indexed. It must be neither too brief nor too detailed, and should be written with such clarity as to be easily interpreted by doctors and nurses. The orders should be inclusive of routine duties of both physicians and nurses.

Such a booklet may be given out for study to new interns or residents and to new members of the staff, and may be thoroughly taught to student nurses in the training school. It is probable that revisions will need to be made about every two years in order to keep the hospital's methods up to date.

Medical records, medical libraries, and professional standing orders are of much importance and must be thoroughly understood by the administrator who hopes to be successful, for all of them are important stones in the foundation of the hospital's medical work. Their proper use will largely determine the efficiency with which patients are treated. Without such efficiency a hospital has little excuse for existence.

2. The Organization and Management of a Medical Record Department, *by Nellie Gorgas**

WHO is most concerned with medical records? Naturally the medical staff. The physicians make and use them, and it must therefore be their responsibility to decide upon their own procedure in making and using them. The medical staff must prescribe definite regulations pertaining to the preparation, completion and filing of records, adopt a definite nomenclature of diagnosis, and establish rules for the guidance of the librarian concerning the use of the records by physicians and the conditions under which information from the records shall be supplied to those desiring it.

The staff must have its own record committee to see that the regulations are enforced, for no one else's authority is sufficient—only that of their peers will be accepted. The committee should be composed of members of each of the various departments. They should act as liaison officers between the record librarian and the medical staff, and it should be remembered that they are the ones to dictate as far as the compiling and the using of the records are concerned. The librarian may obtain her own way with regard to these policies if she is diplomatic, ingenious, and tactful but she must remember that she is their executive officer appointed to carry out their plans, not their superior to force them into following out her plans. Much can be done, though, by subtly forcing the staff members or committees to adopt the plans most workable from an administrative point of view, and by maintaining one's own position of being able to say, in the face of protests, that "I did not make the rules—they were made by your own group—and I am simply trying to carry out your wishes."

The record librarian's success depends upon her ability to train and inspire record-consciousness in the members of the medical staff. It is only the interest and cooperation of the physician which make a record worth being kept and make it be actually used after it has been kept.

* Adapted from *Hosp. Management* 44:52-55, Sept. 1937.

The record librarian's function, therefore, is to execute the wishes of the staff; she owes it to the hospital to do this as economically, expeditiously, and efficiently as possible. This gives her a dual responsibility—to the medical staff and to the hospital superintendent. Her main objective must be carried out in accord with the hospital's general plans. She will find the superintendent in sympathy with her, because it is his primary objective also to provide an efficient workshop for the physician so that the best possible care may be given to the patient. He must, however, always look at the picture as a whole. He cannot favor one department and leave others without ample provisions. He and the librarian must work together to organize the library. He is dependent upon her for technical advice but must instruct her with regard to the relations with the other departments in the hospital, personnel policies, budgets, and finances.

The decisions of the medical staff determine to a large extent the facilities needed. The size of the hospital, its plans for expansion, and the number of patients admitted are other factors to consider in determining how much space may be given to the records. If only current records are to be kept immediately available and others filed away for only occasional use, not so much space is necessary. Supposing, however, a unit system which involves keeping all data with regard to a certain patient in one folder under one unit number, a much larger space is necessary for the active files. It should be noted that the room should always be accessible to the staff and hospital employees, be light and airy, and have plenty of space for study or completing records. Stress should be placed upon the fact that the room should be planned as a permanent and important part of the hospital, never as a makeshift or a temporary arrangement. Records play too important a part in the care of the patient and the training of the physician to be carelessly regarded.

The matter of transportation of records merits much attention. If new records are made for each admission and there is no out-patient department connected, records can probably be carried by messenger the few times needed, but in large complex organizations where the record must be sent from clinic to clinic within a short time, a tube or other carrier system is essential. This matter is usually decided before the building is constructed but all librarians have, I am sure, been consulted as to the relative advantages of various systems and have fairly definite ideas on the subject.

Wood or steel filing equipment must be decided upon. Steel is space-saving and it should be noted that it is poor economy to buy cheap files; they are being constantly used and the irritation and strain caused to the clerk who must use them cost more in the way of morale, and sometimes in actual labor costs, than the relatively small savings made. Card record files are practically always essential, for indexing and cataloging the records. Typewriters and duplicating machines must be had. It is the duty of the librarian to know what is on the market and what will best suit her purposes. The superintendent relies upon her to inform him when equipment is necessary and advise him as to the best purchase for her needs.

Space is very valuable in all hospitals, increasingly so just at this time when building has been almost non-existent for several years and hospitals are again being crowded. The use

of the proper folders, record sheets, and fasteners will conserve space. Again the librarian must have the technical knowledge to advise the superintendent as to qualities so as to ensure permanence without wasting space and money. Not only do space and equipment have to receive careful attention, but their arrangement in the room may save or waste time and energy. Remember that steps cost money, labor is costly, and whatever time can be saved can mean real economy.

Even ink must be considered, for these records are not just for the moment. Too much time and energy are being put into them to justify their losing their usefulness within a relatively short time because of poor ink.

There are certain functions involved in attaining the objective of the record library and these must be carefully analyzed and arranged for. The equipment necessary will depend to some extent upon the subdivision and grouping of these activities. There are five activities common to all record rooms, i.e., (1) receiving and dispatching records, (2) checking the records, (3) cataloging and indexing, (4) filing, (5) safeguarding. There are others which appear in many but not all. Among these are (1) compiling statistics, (2) medico-legal problems, (3) admitting office procedures such as initiating the record and making the face sheet, (4) diagnostic and operative files, (5) insurance forms, and (6) posting laboratory reports in the record.

Some of these activities depend upon the medical staff's dictation, whereas others are a result of the plan of organization of the hospital. The superintendent will have to decide upon the division of activities throughout the hospital. He may find that for convenience, particularly when the tube carrier system is used, the records should be initiated and face sheets made in the record library and sent immediately to the clinic or hospital division. He may find he has not room or personnel in the various laboratories to have reports posted by them into the records, and will have to have the reports sent to the record library for posting. Medico-legal problems may be assigned to the record library if the administrator does not find that he or one of his assistants has time to handle them and can justifiably place enough confidence in his librarian to delegate such matters to her. Insurance forms may be handled in the superintendent's office, the physician's office, or the record library.

The librarian must carefully analyze the work which is to be carried on in her office. After determining exactly what is to be done, she must break it down further, deciding how much time is required for each type of work and combining the activities into units which may be performed by individual workers. In a small hospital there will probably not be more than one or two in the record library, but in the larger ones there may be sixteen or eighteen persons. It is not considered good organization to have more than eight or ten individuals reporting directly to any executive or subexecutive and so the workers should be divided and supervised by others who in turn report to the head of the library.

The thing to remember is that responsibility cannot be delegated. The record librarian is still responsible for the functioning of the record library. She may delegate some of her authority to her assistants who may in turn delegate it to their own assistants, but the re-

sponsibility still lies with the chief executive and she cannot blame mishaps on her subordinates. It is up to her to see that mishaps do not occur.

The chart of organization is one of the best directive devices for the executive. On it should appear an outline of the tasks to be performed by each individual, the relation of each to all the other workers in the office, the jobs leading up to hers and those to which hers leads. Names of the workers may be inserted so that each individual will understand exactly where his work begins and ends and what it means in the whole scheme.

Personnel management is one of the largest tasks in the organization and management of the record library. It involves the selection and training of employees, welfare policies, and incentives and motivation. After the librarian has decided how she is to group the activities, she must analyze each job carefully so as to decide exactly what type of person she needs for each. For some of the work relatively unskilled labor may be used, but for other work well-trained individuals must be found. She will have drawn her plans, of course, so as to pass on to the unskilled worker all the routine work possible and to conserve the executive talent so that it will be used for only highly skilled tasks. File clerks and tube clerks need to be intelligent and accurate, painstaking and meticulous, but diagnostic filing, cataloging, and indexing require a much higher degree of training. It is a checkerboard problem to analyze and distribute the work scientifically and only a well-trained, well-informed, and clear thinking individual can do it, but on it depend efficiency and economy.

When the qualifications have been decided upon, recruiting and selection of personnel are the next steps. It should be pointed out that there can be nothing too hard and fast in the organization scheme. It is often necessary to change the plan of grouping of activities because a person is found to have certain qualifications which will fit her to do a different combination of jobs than was planned for. The ingenious librarian will take this into consideration and readjust her work so as to take advantage of whatever particular skills she finds available. Flexibility is necessary. But it will be infinitely easier to find the right person for the position if one has a very definite conception of what the position is and what qualifications are necessary for it. The most difficult part of the selection of personnel is in evaluating the qualities of the applicant. Even experts who are constantly at the task can give few pointers about how to tell whether a person is as well qualified as she claims or appears to be, and as to whether she will fit into the niche. Intuition often is the guide. Experience does help, however, and one should always follow up on references supplied by the applicant.

In organizing the work, the librarian must evaluate the various jobs on the basis of the degree of initiative involved, training required, physical labor necessary, and hours, so that there will be full recognition in rank and salary for each task, and relativity will be maintained. This is very important in maintaining morale. Fairness is vitally important if one expects the best work from one's employees.

Each new employee must be introduced into his work correctly and not be expected to know automatically exactly what he is to do. The job content, the hours, and the general

hospital rules should be explained and he should be personally presented to his co-workers by his supervisor. A procedure book which contains the policies of the office should be given to him to read through so that he will understand what is going on, even though his part may be very minor. A definite line of promotion should be planned; that is, he should be able to visualize what his next job will be if he wants to work his way up. There are some dead-end jobs in any organization and there are some individuals who have a very limited capacity and cannot possibly progress beyond a certain point. A good organizer will try to fit these together and put the other employees into jobs where they may be understudying the person above them and be ready to step into his job as he steps into the one above. This eliminates turnover and helps keep the work going without interruption, which is even more important in the record library than in most organizations, for the loss of or failure to produce a record may prove a very serious matter, if not for the patient, for the research worker and student.

The scheduling of hours and arrangement for the location of records at any time during the 24 hours in case of emergency are important. Usually arrangements are made with the night admitting officer or the nursing office so that access may be had to the record library when necessary. Even though this is not always desirable—and neither is it always desirable to allow interns and residents to use the library after hours so as to finish records or do research—the librarian must be mindful that the record is for the benefit of the student and physician and so for the patient, and must make efforts to see that whatever is necessary is done even though inconvenient. She must remember also, however, that hers is the responsibility for safeguarding the records and if privileges are resulting in abuse and loss of records, she must confer with the record committee and the superintendent immediately so that steps may be taken to correct the fault.

Each history should give a clear and chronological picture of the entire case from the admission of the patient to the final dismissal, setting forth everything which is done, including the patient's response to therapeutic measures, together with an adequate summary and prognosis. In some institutions the financial statement and the admission card are made permanent parts of the record. Procedures or rules of action must be set up for seeing that the record is checked, that all laboratory and special reports have been inserted, that the record sheets are arranged in the proper order, correctly signed, and that it contains everything it should. The librarian must see that it is complete when it is filed, and no amount of procedure or theory will prevent her having to exercise tact, good judgment, and infinite patience and diplomacy to attain her end, but by working diplomatically through the record committee and the superintendent she can accomplish much.

The confidential nature of the record must be remembered and employees constantly reminded that they are to disclose nothing of what comes to their attention in the line of duty.

Supervision and control are devices for ensuring the carrying out of plans as made. The librarian must check and double-check to see that no slips occur, but if she will spend her

time liberally in directing and seeing that each step is clearly understood by her employees and that they understand their positions and authority relationships, the supervision and control will be easy.

Organizing the facilities and equipment so as to save time and space, fitting the person to the job and the job to the person, clearly delineating procedures so that no misconceptions arise, and treating employees fairly and squarely, are the essentials of management which will produce a record library which will run itself as long as conditions remain static—which they never do, so that we must constantly have our record librarians on the job to readjust their organizations. Again let me stress the fact that the record library is organized for the sole purpose of assisting the physician in providing better medical care for the patient, an objective in which we are all very proud to be playing a part.

3. Medical Records; Are They Worth the Price? by *John R. Mannix**

THE cost of maintaining medical record systems in hospitals has increased to a point where, from an economic standpoint alone, hospital administrators should take inventory to determine whether all possible benefits are being obtained. It seems that such an inventory would show that hospitals are neglecting one of the greatest potential benefits that may accrue as the result of a complete medical record system.

The average direct cost of medical records service in Cleveland hospitals is seven cents per patient day. This includes only salaries of the historian and medical stenographers and the cost of printed forms and supplies. It does not include any charge for the services of the attending and resident physicians or nursing or other professional personnel in recording the data, nor does it include any overhead such as housekeeping and maintaining of space and equipment for the medical record department. The *Journal of the American Medical Association* for March 30, 1935, shows that acute hospitals in Ohio (not including mental and tuberculosis hospitals or hospital departments of institutions) are rendering 4,000,000 days of service annually. Granting that the direct medical record cost throughout Ohio is the same as the Cleveland average, the direct cost for the state would be \$280,000 a year. It is probably conservative to estimate the total cost at twice the direct cost, so that the total cost for Ohio would be over \$500,000. On this basis, the cost for the United States is over \$8,000,000.

The question arises as to whether hospitals and the medical profession are receiving benefits to justify this great expense. We agree that certain records are necessary during the treatment of a given patient; we agree that the hospital must maintain a case history for its own legal protection; we know that medical records have aided in subsequent treatment to individual patients as well as members of their families; we know that in many of our institutions research is being conducted on various types of disease and that medical records of individual cases greatly aid in such research. Are there other ways in which medical records can be of use in medical and hospital practice? It seems that there is another

* Adapted from *Mod. Hosp.* 45:71-72, Sept. 1935.

way, and this way may be of more importance in medical and hospital practice than any other.

Accountants like to differentiate between bookkeeping and accounting. Bookkeeping is defined as the act of making an orderly recording of the financial transactions of an organization, and accounting as an interpretation of the financial transactions. Now it would appear that hospitals carry on a medical bookkeeping system, and not a medical accounting system. The modern hospital makes an orderly and accurate recording of the history and treatment of patients, and, to be sure, it classifies disease, operations, injuries, and deaths. In addition, it records patient admissions, days of service, x-ray examinations, laboratory examinations. Then it proceeds to file such records in expensive filing equipment in the basement or attic. There is, so to speak, little or no accounting—there are no interpretive records. The charts are completed, the case classified on the diagnosis and other indexes. Patient days, admissions, and other data are compiled but remain separate records; their relation to each other is seldom shown.

I should like to suggest that we give consideration to the development of a monthly report which would show such data as the following:

Discharges as to classification of disease	
Discharges as to condition at time of discharge	
Recovered	Newborn infants
Improved	Deaths—institutional
Unimproved	Deaths—forty-eight hours
Observation cases	Stillbirths
Surgical operations and type of anesthesia	
X-ray treatments	
X-ray examinations	
Laboratory examinations	
Physical therapy treatments	

All these data should be tabulated by service, and should show a comparison with the same month the previous year. Data should also be developed for the year to date, and this compared with the same period in previous years. Data should be developed to show the length of stay of in-patients on each of the services and this compared with past periods. Ratios of x-ray examinations and laboratory examinations to patients served on each of the services should be compiled. In other words, we should have a medical report similar in scope to our financial report. We should have a report of our medical services which would enable our staffs as well as the administration to evaluate the medical performance of our institutions.

A quantitative monthly report of this type distributed to members of the medical staff and reviewed at the medical staff meetings would suggest qualitative medical study and research and would probably result in a closer working relationship between the medical staff and the medical record department. Such a record would serve as a yardstick of performance which would justify the expenditures we are now making for medical records.

4. The Patient's Chart or Patient's Hospital Record, *by Wendell J. Wright**

IN discussing the legal aspects of patient's chart or patient's hospital record, the following questions are to be considered: Is the patient's record a confidential record between the patient and the physician? Who may examine the patient's record? Is permission of the patient necessary? Is permission of the physician necessary? What is the status of the record in compensation and medico-legal procedures?

In my discussion of these subjects I wish it to be understood that it is applicable only to hospitals and physicians in the state of New Jersey or states in which the Common Law Rule is in force as distinguished from statutory modification thereof. It must also be borne in mind that I am discussing these subjects from a purely legalistic standpoint. The ethical side of the question is another matter.

The Statute Law of New Jersey is for the most part silent upon these questions and, therefore, we must rely upon the general principles of the Common Law. The only statutory provision in New Jersey which has a bearing upon the questions is Section 4 of the Hospital Lien Law of 1930, which provides:

Any person or persons, firm or firms, corporation or corporations legally liable or against whom a claim shall be asserted for compensation for such injuries, shall be permitted to examine the records of any such association, corporation, or other institution or body maintaining such hospital in reference to such treatment, care, and maintenance of such injured person.

This statute is limited to cases commonly known as "damage cases" in which the injured person claims to have been injured by the negligence of third parties and is limited to those cases of that class in which a hospital files a lien against any judgment or settlement which may be made with the injured person.

There is a fairly widespread belief that hospital records are confidential as between the patient and the physician and the patient and the hospital. This belief is, undoubtedly, based upon an even more widely held belief that all communications of a professional nature between a patient and his physician are strictly confidential; or, to put it in legal phraseology, that such communications are "privileged communications," by which is meant that the recipient may not and will not be permitted to divulge them to anyone under any circumstances, except by the express consent of the other.

Contrary to this general belief, communications between a physician and his patient are not privileged communications in New Jersey. Such communications were not privileged communications under the Common Law. Several of the states, New York among them, have passed statutes which made such communications privileged and confidential, but New Jersey is not one of those states. In this state a physician has no legal right to refuse to disclose the subject matter of a communication between himself and a patient when he is called upon to testify with respect thereto in a legal proceeding. The physician is not bound by law to refrain from disclosing such communications under proper circumstances as, for

* Adapted from *Hospitals* 12:41-43, Jan. 1938.

example, when failure to make such disclosure would work an injustice or tend to defeat a proper investigation. However, a physician might be responsible for damages or, perhaps, indictment for criminal libel, if he disclosed such communications to persons not entitled to them, as, for instance, to some person who had no interest other than curiosity.

The situation with reference to a patient's hospital record is largely analogous. It is obvious that if communications between a physician and his patient are not privileged there is no more reason to hold a hospital record privileged. Such a record is not *legally* either confidential or privileged as between the patient and the physician, between the patient and the hospital, or between the hospital and the physician.

Except as to cases falling squarely within the provision of the Hospital Lien Act, the liability of a hospital for the disclosure of a patient's record is governed by the Law of Libel and Slander. Under such law there is what is known as "qualified privilege." This means that certain communications made under certain circumstances to third parties who have an interest in the subject matter are not actionable if they are made in good faith with reason to believe that they are true and without any malice toward the person affected.

Section 5 of Article I of the New Jersey Constitution expressly provides that no person shall be convicted of criminal libel if the statements made are true and were made with good motives and for a justifiable end. It, however, provides that the jury shall decide both the law and the fact with respect to these questions so it must be borne in mind that a jury must be convinced that the statements complained of are true and that they were made with good motives and for justifiable ends. So far as criminal prosecution for libel is concerned, the fact that the statements made may be true is not a sufficient defense unless it also appears that they were made with good motives and for justifiable ends.

It can, therefore, be definitely stated that a patient's records are not confidential or privileged between the patient and the physician, between the patient and the hospital, or between the hospital and the physician.

Only a person having a real interest in the information to be disclosed has a right thereto. The public authorities and, particularly, such authorities as have charge of the enforcement of the criminal law, unquestionably have the right to such information if the same reasonably pertains to a bona fide investigation which they are making. Such records are always available, if relevant, to litigants in the courts and the courts will require their production by process of subpoena. Persons who have a real and substantial interest in the information desired are entitled to receive such information, but the burden is upon them, in the first instance, to satisfy the hospital or physician that they in fact have a substantial interest.

What is a "substantial interest" sufficient to entitle a person to secure the information contained in the records or known to the physician may sometimes be a doubtful question. Ordinarily, close members of a patient's family have a sufficient interest. Persons who are charged with negligence resulting in the injuries to the patient, for which they may be held liable, have a sufficient interest. Employers who are charged with the obligation of paying compensation to injured employees have a substantial interest. Health and accident

insurance companies that have insured the patient have such an interest. Life insurance companies that have insured the life of a patient, after the death of the patient may, under certain circumstances, have a sufficient interest.

There are probably other cases in which an applicant for information has an interest which would justify the disclosure. The person to whom application is made for inspection and information can usually determine whether the applicant has sufficient real interest to entitle such applicant to any information sought. If, however, there is any doubt, the only absolutely safe rule is to refuse the information.

The answer to the next two questions is apparent. The permission of neither the patient nor the physician is necessary as a prerequisite to the disclosure of the information.

The hospital record is not in itself evidence of what it contains. It is simply a "memorandum" made by the physician or nurse or some other employee of the hospital of facts ascertained by them or someone else. Its sole value in legal procedures is as a memorandum to be used to refresh the recollection of the person or persons who made or supervised the making of the record. The physician who treated the patient is entitled to refer to the record to refresh his recollection when testifying as to the patient's condition; similarly, a nurse called as a witness, may, if she made the record herself, use it to refresh her recollection as to the facts with respect to which she is called upon to testify. It is true that sometimes by consent of the parties to a litigation a hospital record is admitted in evidence but it can only be so admitted by the consent of the parties and the permission of the court. If so admitted it then becomes evidence of what it contains.

From the ethical standpoint, there can be no question but that the hospital records should, so far as possible, be kept confidential. We all know that a great many persons who are patients dislike very much any publicity, even among their friends, with respect to their ailments or treatment. On the other hand, even those who enjoy discussing their "operations" desire to do the telling themselves.

There is also another situation in which a hospital or a physician may occasionally be placed—that is, when they have knowledge of facts the non-disclosure of which would defeat justice or work an injustice or a hardship upon some other person, and it is my opinion that when such occasions arise, both the hospital and the physician should not hesitate voluntarily to disclose to the proper persons in interest such knowledge of the facts. Under such circumstances, the provisions of the Constitution would protect them from prosecution for criminal libel, and the doctrine of qualified privilege, which exists with respect to the Law of Libel and Slander, would protect them against the imposition of damages in a civil suit.

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CHAPTER XVII. ADMITTING AND DISCHARGE

1. Admission of Patients, *by B. C. MacLean, M.D.**

THAT the admitting office in a hospital is a key position is too well known to warrant much comment. The details of the procedures and formalities of admission, however, may be briefly considered if only to provoke suggestions, comparisons, and constructive criticism. I propose to deal with indoor admissions only and mainly with such routine as applies in the larger general hospitals.

Since the first impression on patients and relatives or friends is so important, the choice of personnel for this part of the hospital mechanism should be a careful one. It is debatable whether a doctor, nurse, or clerk is preferable as an admitting officer. The advantage of a medical man is obviously his ability to scrutinize intelligently the diagnoses on patients referred for admission to public wards by out-patient departments or outside physicians. He may also attend to such duties as the signing of insurance papers, the obtaining of consent for autopsies, and the completion of all death certificates. With a large public service, he is in a position to learn well the general operation of a hospital, and it is here that many hospital administrators have served the most valuable years of their apprenticeship.

In the case of private or semiprivate patients, however, the routine depends on whether patients are (1) admitted direct to the room or ward, or (2) admitted through an admitting office. In the first instance, reservations are made in advance and the admitting slip left on file at the information desk. The patient then is taken by an orderly direct to his room and the supervising nurse on that floor is the first to receive him. It is her duty to obtain the statistical data and possibly also to obtain his signature to the formal guarantee of payment. More than this she cannot do for it would be unwise to permit the discussion with patients of finances or deposits by so varied a type of personnel. Any further approaches to the patient in this regard must be left to a credit clerk. If collections are difficult and bad debts over 2 per cent, or if the problem of patients taking accommodations above their means is an acute one, this method provides no opportunity for a preliminary interview. This system is obviously more practicable in a closed hospital or where the attending physicians who refer cases are sufficiently interested in the economic side of the hospital not to send in "nine-penny" patients to "two-pound" beds.

In the second instance, the patient is received and interviewed by a nurse or clerk in an office for this purpose. If a nurse, she may be in uniform or not. Personally, I believe a white uniform does not frighten the patient but rather tends to instill confidence. The requisites are that this person shall have a deal of common sense, much tact, a good personality, and a sympathetic attitude. To these add some general medical knowledge and a sensible viewpoint and the hospital has an ideal employee for this position. A lay person

* Adapted from *Tr. Am. Hosp. A.* 32:365-367, 1930.

often possesses these qualifications in greater abundance than any doctor or nurse and the professional touch then is a luxury.

Hospitals are frequently the subject of satire and caricature because of the tiresome ordeal which intervenes in the process of being transformed from the vertical to the horizontal. The patient facetiously remarks that "the hospital's first interest seems to be in the patient's religion rather than his ailment and in his nationality rather than his comfort." Tact and courtesy must overcome this and, after all, statistical data are essential and easier to obtain at the beginning. Entering a hospital today is less feared than was formerly the case. Indeed it is in many cases an adventure or the beginning of a series of adventures which will furnish table talk and bridge conversation for months or years to come. The path of entrance may be smoothed much, however, by a systematic chain of service from office to bed. The routine should include:

1. Suggesting the deposit of valuables in the hospital safe
2. Presentation of a card with rules of the hospital, list of charges for various services, and an explanation of the patient's status as a guest and the wish of the hospital to serve
3. Notification of telephone switchboard
4. Notification of information desk
5. Notification of intern
6. Notification of attending physician
7. Conduct of patient to ward by orderly or other employee
8. Reception by supervising nurse, who should at once introduce herself by name and offer attention

Such other details as recording weight, temperature, pulse and respiration, bath, and disposition of clothes belong to nursing procedure, but one important point is an immediate diet order by the attending physician or intern. This will often prevent difficulties when a patient is admitted at or near the meal hour.

Unless the patient is known to the admitting officer, it is necessary to discuss finances—and here comes the rub! Here, too, is where tact counts if the sheep are to be distinguished from the goats and the reputable citizen from the dead beat. With the latter, grim firmness may be necessary, for not only will many ask for accommodations out of proportion to their means but many too will try to evade payment for such services. A patient will pay for his railroad or steamship tickets in advance but resents the hospital's equally logical request for an advance payment. Hospital service once rendered cannot be taken back like the radios bought on the installment plan but, strangely enough, the request for a deposit on a hospital account is often resented. The initial deposit, the signing of a guarantee of payment, and the scrutiny of the account at regular intervals by the credit clerk will protect this type of patient from his own extravagance and the hospital from his imposition. The discreet use of a credit bureau, a social service exchange, and a blacklist for reference purposes is a valuable assistance. In all such interviews, however, privacy should be afforded. A patient is reluctant to discuss his finances over a counter or in a crowd of people.

In the admission of public ward patients, there are to be considered the merits of the centralized or decentralized system of bathing, delousing, and clothes checking, and the advantages of observation wards and other quarantine procedures.

The methods of admission of emergency cases, very ill patients, or infants and children must, of course, be suited to the circumstances, but in every instance we should avoid the brusque, hard-boiled attitude and consider comfort and convenience insofar as is compatible with the interests of both hospital and patient.

2. How an Effective Admitting Plan Saves the Hospital Money, *by B. W. Stewart**

THE title of this paper should be *Hospital Admitting and Discharging Procedure*, since the two are so closely associated that they can hardly be separated.

The Cleveland Hospital Council's plan for admitting patients is so excellent that I have asked and received permission to incorporate a part of the plan in this paper. It is well worth considering. Although the part dealing with the collection of accounts through the Cleveland Hospital Council has been omitted, it is replete with helpful suggestions for those cities that have a central council.

Hospitals need to exercise control over the methods used in the giving of part-pay and free service, as well as those used in collecting for full-pay work. It is desirable that hospitals establish a uniform principle covering the investigation and approval of part-pay and free cases, as well as uniform methods for the collection for service rendered to full-pay cases.

The admitting officer is an important person in any hospital organization. A study of this key position leads to the conclusion that if this position is not assigned to the proper person the admitting procedure is a failure. If the admitting officer does not assign the patients to accommodations within their means, the loss that is sustained by the hospital may nullify the efforts of a competent administration to save money for the institution. Also, if patients are assigned to accommodations for less than cost when they are able to pay more, there is a loss. The financial gain to the institution by proper admitting methods is by no means the all-important one. The satisfaction of the patient and his ability to pay for the service to which he is assigned as well as the good will the hospital enjoys are of equal importance.

The same procedure is possible regardless of whether the admitting officer is a nurse, a night supervisor, a clerk, or a cashier. The small hospitals may not have an admitting clerk but, regardless of the person who does the admitting, they should follow the same procedure. Admissions made at night should be checked the following morning by those in charge of the credits during the day. The actions of the admitting clerk are powerful factors in building the good will that is one of the hospital's most valuable assets. It is strange but true that many persons upon entering the hospital want to give the impression they have money to pay their way and demand the best, and yet upon leaving the hospital they seek to give exactly the opposite impression. They are poor, they say, and cannot pay.

* Adapted from *Mod. Hosp.* 37:57-60, May 1932.

YOUNGSTOWN HOSPITAL

North Side

Reg. No.

Name Admitted 19.... A.P.M.

Address Room No.

Age Nationality Religion Color..... M.F.S.M.W.

Name and address of nearest relative or friend

..... Phone No.

Occupation Employer

Charge to Check No.

Admitted by Dr. Treated by Dr.

Conveyance Admitting Officer

Information given by

Remarks

.....

Provisional diagnosis

Intern notified

The admitting officer should have the following qualifications: a knowledge of hospital routine; a business training and a social point of view that will enable him to obtain and evaluate information regarding the ability of an individual to pay for hospital service; a personality that will enable him to deal with all classes of patients satisfactorily. The admitting officer should be responsible to the administrative officer. The model admitting officer is preferably a woman, neither too old nor too young. She has a pleasing personality and dresses tastefully and neatly. The initial contact can influence the patient throughout his or her stay in the hospital. If it is unpleasant it will long be remembered by the patient even though he may be satisfied with the rest of the service.

When the patient has applied for service, the admitting officer tactfully obtains all the information necessary for assigning the patient to accommodations that his financial circumstances indicate he can pay for. If the patient requests private or semiprivate room service and if, in the light of the information the patient has given, the admitting officer feels that the patient is unable to pay for such service, he carefully explains to the patient that the service he will obtain in other accommodations will be equally satisfactory.

If the hospital has any extra charges or higher charges for service in private rooms than in the wards, this is also explained carefully to the patient. So often patients merely figure the fifty cents or a dollar, or whatever it may be, difference in the price of the room and are surprised that there are additional extras. It is always well to examine the account of any patient wishing to move from low priced to higher priced accommodations. This is especially true of accident cases.

The overselling of accommodations should not be tolerated in any institution, and this should be emphatically stated as part of the instructions to the admitting officer. Permitting patients to take private room accommodations is sometimes an injustice to them. The overselling of accommodations has a bad effect on the friends of the patients and on the public. The more the hospital oversells accommodations, the harder it is to collect the account. The family and friends of patients will often insist on better accommodations than they can afford. This can frequently be avoided if the patient is made to understand that the care he receives will be satisfactory and his chances of recovery as good in the cheaper accommodations. All extra charges, for operating room, laboratory, anesthetic, x-ray, and special medicines, should be explained to the patient. Especially should he be told if these charges are higher in a private room than in the ward. The public must be educated to realize that hospitals expect their service to be paid for.

In the recording of patient days, the following outline should prove helpful:

1. A pay day is one day of service rendered to any patient who is billed as much as the established ward-bed rate.
2. An allowance day is one day of service rendered to any patient who by reason of his economic status is billed less than the established ward-bed rate.
3. A free day is one day of service to any patient to whom by reason of his economic status no bill is rendered. A complimentary day is one day of service rendered to any patient who, because of his hospital affiliation or because of reasons other than economic, is not billed for service. This does not include service rendered to employees. An employee day is one day of service rendered to an employee of the hospital for whom no bill is rendered. (An industrial day's service shall be recorded as a pay day.)

The hospital should maintain an admission register, this register to provide for the recording of admissions according to the classifications mentioned and also to provide for the recording of the total days of service rendered to each patient according to these classifications. At the time of admission, all private cases are recorded as pay patients. After a detailed financial investigation, all cases admitted as free patients are listed as free patients. All complimentary days and employee days are properly recorded at the time of discharge. The total number of days of service are recorded according to the respective status of the patients.

The hospital can frequently establish a credit rating through a close contact with the members of its medical staff, since they are quite often in a position to reveal the truth about the financial affairs of patients. At the same time the hospital must guard against certain members of the medical profession who will want to get the best for all their patients regardless of their ability to pay. In the average hospital a great number of patients come in through the emergency department or in an invalid carriage; then it is a case of the hospital's making arrangements with the nearest relative or friend. An alert admitting officer can often tell from the street address whether or not the patient is able to pay.

There should be an absolute understanding about the financial arrangements before the

patient is admitted. Each hospital will have its own arrangements, but the important thing is to have them made before the patient is admitted. The practice of having the patient pay in advance or sign a guarantee of payment should be continued in those hospitals in which this procedure is now followed, and those hospitals that are not now requiring a signed guarantee of account should do so for the protection of their own interest. In securing signatures on a guarantee of account, the admitting officer should be instructed to obtain the address of each person signing in order to obviate any difficulty in locating or tracing the person who has signed a guarantee.

There are two kinds of guarantees: (1) when the account of the patient is to be charged to another person; (2) when a guarantor assures the payment of the bill for services rendered to the patient. In the first case, it is well for the hospital to have an order which reads, "Please render services to and charge the same to my account." On an order of this kind it is necessary to establish the credit of the person giving the order as the hospital releases the patient from all responsibility. The second guarantee is preferable since the other person guarantees the payment of the bill for services rendered. In this case, the hospital can hold the patient as well as the guarantor. If the account is to be charged to an industrial company, a communication should be sent to the company asking it to guarantee the bill, or if it carries industrial commission, to give the hospital the claim number. If it should be a township, city, or county case, it is well for the hospital to get the permit or authorization signed as quickly as possible so that, in cases where the patient is to be responsible, the bill can be collected before he leaves the hospital.

A charge should be originated for every patient admitted to the hospital regardless of the source from which patients have been referred. With two exceptions, a bill for service should be rendered to every patient. These exceptions are: (1) cases referred by social agencies when a previous financial investigation has been made, the findings of which in the opinion of the admitting officer warrant free service; (2) cases referred by the hospital dispensary after a detailed investigation has been made by the social service department, the findings of which in the opinion of the admitting officer warrant free service. Accounts of these two groups should be charged to free service.

When patients are admitted, accounts should be definitely classified as pay, part-pay, or free. If they are pay, they should be marked as to what collection method the hospital wants to use in case the bills are not paid—whether the hospital wishes to threaten suit, or whether the patients should be sued in case of nonpayment. A hospital has a right to sue, and some cases should be sued. On the other hand, if it is found that the patient has a large family and is the wage earner of the family, or if it is discovered that he has been out of work and that there is no chance to collect, it is better to charge the account to charity when the patient is dismissed, rather than to build up a large amount of accounts receivable and thereby have a large amount to charge off as uncollectible. (This does not mean that the hospital cannot send statements or letters to certain cases, even though the executive feels that the account probably cannot be collected.)

It is only by the proper classification of accounts that hospitals can obtain the proper

credit for part-pay and free work. Most hospitals do a large amount of charity work by way of unpaid bills for which they get no credit. In the average hospital doing a large amount of work in accident cases and out-patient departments, the number of bills returned because of wrong addresses is amazing. Many of these could be eliminated by better supervision in admitting patients.

The entire procedure of admitting and discharging may be summarized briefly as follows: The hospital obtains the information necessary for the admission of the patient. Someone, preferably the person in charge of admissions, takes the patient courteously to the floor or room, and turns him over to the nurse in charge. The cover for the history or chart is made, giving available information. This is given to the nurse. A copy of the admission information is given to the office for the account. The intern on service is notified. If the hospital does not have interns, the attending physician is notified that his patient has arrived at the hospital. All patients' discharge orders are signed by the attending physician. The office is notified when the patient is ready to be discharged. A card is sent to the office and if the account has been settled according to arrangements, an O.K. is put on the card; if not, either the patient or a friend of his is requested to come to the office. The nurse takes the patient to the door and if necessary helps put him in the car.

This paper has dealt with the procedure for patients who come in the regular way through the admitting office. If the patient is an emergency case, treatment is given first; the regular procedure may then be followed either at the patient's bedside if the patient is able to talk or, if not, with his friends or relatives. If a patient comes in without being sent by a physician, except of course an emergency case, he should always be examined by an intern, the chief resident, or a staff physician before he is admitted. A patient who is very sick should never be kept waiting. He should be taken to the room or bed immediately. Information may be obtained later from relatives or friends.

3. Determining the Ability of the Patient to Pay for Medical Care, *by Michael M. Davis**

MEDICAL service in hospitals and clinics needs to be regarded from four points of view: that of the patient who needs certain medical service; that of the community interested to see that patients secure what they need even if they are unable to pay for it; that of the physician who is the main professional agent in rendering medical service; that of the hospital or clinic, the institution administering the service.

In determining the ability of patients to pay for medical service, three primary elements are to be considered: the income of the patient or family considered on an annual basis; the size and constitution of the family, affecting, as these do, the necessary expenses; the cost of the medical service required by the patient. Emphasis needs to be laid on considering irregular or seasonal earnings in the estimation of annual rather than monthly or weekly income. Supplementary as well as main sources of income should be included, and debts

* Adapted from *Mod. Hosp.* 31:134-136, Nov. 1928.

and other financial obligations should be ascertained. The paying ability of a family is substantially affected by its constitution. A family of adults, for example, differs decidedly in its needs from one with the same income composed of parents with several young children. Elderly parents or relatives who must be supported may have to be considered as part of the family group even though they live elsewhere.

The diagnosis of a disease may cost, at private rates, from a few dollars to several hundred dollars. The cost of treatment varies even more widely. Obviously the ability of a patient to pay depends not so much upon his financial resources as upon the relation between his resources and the cost of the service required. The duration of an illness must also be considered both as affecting expense and as causing loss of income if the patient is a wage earner.

In estimating ability to pay, all three factors of income, constitution of family, and cost of service must, of course, be considered together. Patients who, judged by these standards, are able to pay for private care should be referred thereto. Other patients when admitted to the clinic should be treated free if they are unable to pay the usual clinic fees.

In addition to the statement of these principles, a number of practical considerations should be indicated. The determination of a person's ability to pay for medical service is important, not only to decide whether a person or family is eligible for free or charitable service but also—in many hospitals and clinics—to determine what rate of a graded schedule of fees the patient can fairly be asked to pay.

In the practical admission of patients, budget schedules are sometimes prepared aiming to show what income families of various sizes should have to measure up to a reasonable minimum standard of living. Such schedules are somewhat useful in determining ability to pay but the situation of families varies so widely and the varying cost of treatment introduces so many complications that they should serve only as suggestions, not as definite guides. Patients ordinarily able to pay for private medical care may be temporarily in the clinic or ward group because of accident or misfortune. Patients may be able to pay for private care or full hospital rates for a minor or short illness, whereas for a major operation or for an illness requiring specialized or expensive service they would fairly receive care at reduced rates or free in a hospital or clinic. On the other hand, the paying ability of a family may be increased by judicious budgeting or arrangements for time payments.

Certain medical situations, such as emergency cases and cases of communicable disease, override financial considerations and require the admission of the patient for at least one treatment.

The rejection of applicants for admission to clinics because they can afford to pay at private rates for the medical service their condition requires raises the question as to how such patients shall be referred to private care. It is generally found that many such cases have no regular family physician and do not appear to know a qualified practitioner. Each institution should adopt for itself a definite procedure according to which the admitting officer shall inform the patient of the name of a physician or of a list of physicians approved by the staff or by the authorities of the institution.

In the administration of admission systems it is desirable that every opportunity be given to physicians, whether or not they are members of the institution's staff, to call the attention of the admitting officer, or of the superintendent, to cases whose circumstances they believe have been judged incorrectly. Complaints of this sort should not be made in the presence of patients. The administration of the institution should accept the responsibility of investigating every such complaint and of informing the physician of the findings. It is desirable that a central committee representing the medical profession through the Academy should be ready to consult with officers of medical institutions or of social agencies regarding these matters of policy or concerning cases that have caused complaint.

It is desirable that a group representing the administrative authorities and admitting officers of all clinics in the city should meet systematically for mutual information for the adjustment and advancement of standards and methods, and for joint discussion, when necessary.

4. Hospital Care for the Needy; Relations between Public Authorities and Hospitals, *by a Joint Committee of the American Hospital Association and the American Public Welfare Association**

A JOINT committee of the American Hospital Association and the American Public Welfare Association has been at work for some time upon the subject of hospital care for the needy, on the general principle that public funds may be used for the care of the needy sick in hospitals as appropriately as for general relief, without in either case displacing nongovernmental hospitals and relief agencies from their charitable functions. In 1937 the two associations officially adopted a statement of general policy concerning the use of tax funds for the care of the needy sick in nongovernmental (voluntary) hospitals. This statement is published herewith (Number I). As a result of this publication, it appeared that public officials and hospital administrators would welcome some detailed suggestions for carrying out this general policy effectively. In the autumn of 1937, therefore, the joint committee undertook to prepare statements on three specific subjects, namely: hospital standards, the per diem rate, and determining financial eligibility. These statements are also published herewith (Numbers II, III, and IV). While these statements have been prepared with welfare officials primarily in mind, it is believed that they may be useful to officials of other governmental departments who are often charged with responsibilities for providing medical care.

I. *Relations between Public Authorities and Hospitals*

The need of hospital care for persons unable to pay for it out of their own resources raises the question of the facilities available for such care in various communities throughout the United States, and of the sources from which the costs of the care are to be met. The general hospitals of the country (excluding the special hospitals for mental diseases, tuber-

* Adapted from *Hospitals* 12:17-24, Aug. 1938.

culosis, etc.) are in part maintained by governments, chiefly city and county, and in part by voluntary agencies. The governmental general hospitals (excluding those provided by the Federal Government for veterans and other special groups) constitute 12 per cent of the hospitals and provide 23 per cent of the beds. The nongovernmental hospitals constitute 83 per cent of the number of general hospitals and furnish 68 per cent of beds.

The distribution of facilities according to counties gives a better picture of the situation. There are 3,073 counties in the United States. In 43 per cent of these counties, having a population of 44,000,000 or about 36 per cent of the whole population of the country, there are no governmental hospitals at all. In 5 per cent of the counties, having only about 3 per cent of the population, the provision of general hospital care is entirely in governmental hospitals. In 296 counties (nearly 10 per cent of all counties), having 46 per cent of our total population, both governmental and nongovernmental general hospitals are found. Especial attention should be directed to these counties, which are found in almost all of the states and which include most of the counties containing large cities. In these 296 counties, the nongovernmental beds constitute about two-thirds of the total provision, the government beds about one third. The government beds are, however, relatively concentrated in a comparatively limited number of centers, so that in 25 per cent of these 296 counties the government beds constitute less than one fourth of the total local provision and in two thirds of the counties the government beds constitute less than one half of the total.

The capital investment in all general hospitals (with a total of about 450,000 beds) is about two billion dollars, an average of between \$4,000 and \$5,000 per bed. As will be seen from the preceding statement, the larger part of this costly investment is in nongovernmental hospitals.

With these facts in mind, conferences have been held between representatives of the American Public Welfare Association and the American Hospital Association concerning the relations between hospitals and public welfare authorities, and particularly with regard to the hospital care of persons who are public charges or who are unable to pay for hospital care. It is taken for granted as a sound principle of public policy that in so far as governmental hospital facilities are available in a community, public funds for the hospital care of the sick shall be expended in the public agency.

The following statement of general policy was approved in 1937 by the governing bodies of both associations.

1. It is recognized that the provision of general hospital beds by local governments in the larger cities is generally insufficient to meet the needs for free or low-pay hospital care; and that in the great majority of small cities and towns there are no governmental hospitals and these localities must depend on voluntary hospitals, in which a large investment for building and equipment has been made.

2. It is recognized that the use of tax funds from local governments to pay voluntary hospitals for the care of public charges is a widespread and, under some local conditions, a reasonable policy.

3. It is the unanimous belief that such payment to hospitals should be on the

basis of service actually rendered, and that payment in a lump sum or subsidy basis is undesirable.

4. Public welfare officials will find it advantageous to deal with the hospitals of their community jointly. The experience of local public officials indicates that this can best be accomplished through the organization of hospital councils within each community or political unit of sufficient size. Where, because of the smallness of the community or for other reasons, hospital councils are not practicable, public officials may wisely suggest that the local hospitals constitute a committee to represent them jointly in conferences with public authorities.

5. Public officials should recognize that good hospital service is increasingly complex and costly; that a high standard of care of patients is important that an ultimate economy should appreciate the close relation of hospital service to general medical practice and to public health.

6. The hospitals on their side should recognize the advantages of presenting a united front to the community concerning their needs; of avoiding internal dissension and competitive action which would lower standards of service. The public-spirited citizens on voluntary hospital boards should present their case to governmental officials without a competitive attitude and from the point of view of community needs.

7. Both the public officials and the hospitals of each community should recognize that the rate of payment for service must be adjusted through conference as the result of numerous considerations which will vary among communities, and that no fixed, simple formula controlling rate of payment can be generally applied.

8. Voluntary hospitals, through hospital councils or otherwise, should cooperate with other community forces in an honest effort to control future expansion of bed capacity beyond community requirements. Excessive new building by individual institutions has not infrequently led public officials to indicate that any payment to voluntary hospitals would tend to encourage further unnecessary expansion.

9. In seeking payment from public sources, hospitals must recognize that the accepted policy today is to the effect that public funds should be expended through public authorities; that some control or supervision of accounts, procedure for charging, and admission of public charges must be expected by voluntary hospitals when they are dealing with governmental units or requesting funds from them.

10. The utilization of voluntary hospitals for the care of indigent persons at public expense requires, furthermore, encouragement by public officials and by the hospitals themselves of uniform accounting systems and of high standards, such as those required for the approved lists of the American College of Surgeons.

II. *Hospital Standards*¹

Principles for the determination of standards which public authorities should apply for the admission of local nongovernmental hospitals to the list of those eligible to receive and be paid for the care of public charges. In the statement of general policy approved in 1937

¹ Prepared by the Joint Committee, May 1938.

by the governing bodies of the American Hospital Association and the American Public Welfare Association, paragraphs 9 and 10, quoted below, contain their recommendations in regard to supervision of hospitals and the imposition of standards:

In seeking payment from public sources, hospitals must recognize that the accepted policy today is to the effect that public funds should be expended through public authorities; that some control or supervision of accounts, procedure for charging, and admission of public charges must be expected by voluntary hospitals where they are dealing with governmental units or requesting funds from them.

The utilization of voluntary hospitals for the care of indigent persons at public expense requires, furthermore, encouragement by public officials and by the hospitals themselves of uniform accounting systems and of high standards, such as those required for the approved lists of the American College of Surgeons.

The American College of Surgeons regularly inspects all general hospitals of 25 beds and over and publishes yearly a list of those which are approved. Consequently, information as to whether or not a hospital meets the minimum standards of this organization is readily available. In communities in which an adequate number of beds can be furnished by hospitals on the approved list, hospitals not approved by the American College of Surgeons should not be utilized. Voluntary nonprofit hospitals should be used as far as available. Proprietary hospitals may be considered for use when local conditions require.

It is taken for granted as a sound principle of public policy that in so far as governmental hospital facilities are available in a community public funds for the hospital care of the sick shall be expended in the public agency.

In communities in which the number of beds in approved hospitals is insufficient to meet the needs for the hospitalization of public charges, representatives of the public authorities and of the approved hospital may agree jointly as to the utilization of beds in unapproved hospitals, if the latter show a desire to improve their standards and to submit to supervision. In communities in which there are no hospitals on the approved list of the American College of Surgeons, the public authorities should seek professional advice from those informed about hospital standards, such as the county or state medical societies, the state representative of the American College of Surgeons, or representatives of local, state, or national hospital associations. In some communities where there are no hospitals or where the existing hospitals provide a very inadequate type of service, public authorities have made arrangements to utilize beds in approved hospitals in adjoining counties or states.

In communities in which the number of approved hospitals and beds is more than sufficient for public charges, additional requirements beyond the minimum standard of the College of Surgeons may be determined by the public authority after consultation with the hospitals in order to promote the best care and the most efficient administration.

In those states and cities in which aid to voluntary hospitals from public funds has been

most successfully administered, fund-giving authorities have expected that the participating hospitals meet certain minimum requirements. They have also required explanation of the methods of computing costs and, when necessary, sufficient inspection of records to ascertain that bills rendered for public charges are for the actual treatment of patients for the number of days indicated.

Nongovernmental hospitals which receive public funds must expect that the public departments responsible will expect satisfactory standards of service; and also will take whatever steps are necessary to insure that the sums of money requested have actually been spent. Checking of accounts and inspection of records will, of course, be necessary. Comparable systems of accounting are desirable in order that costs may be more readily ascertained. The only hospitals which will resent such requirements are those which do not already conform to accepted standards. Utilization of comparable methods of accounting will be advantageous to all hospitals because they will make possible comparative studies of services and costs of value to all concerned.

The following statements of policy present the principles which underlie the discussion in the preceding paragraphs.

1. Nongovernmental hospitals utilized for the care of persons as public charges should meet at least the minimum standards required for hospitals on the approved list of the American College of Surgeons. Additional requirements may be made by local action.

2. In communities where the number of beds in approved hospitals is insufficient, the public authorities and the approved hospitals may agree jointly on the utilization of additional hospitals, provided these hospitals agree to conform to acceptable standards of service and to submit to inspection.

3. In communities where there are no hospitals on the approved list of the American College of Surgeons, public authorities should seek professional advice from those informed about hospital standards, such as the county or state medical societies, the state representative of the American College of Surgeons, or representatives of hospital associations.

4. In communities without hospitals, public authorities should consider the possibility of utilizing beds in approved hospitals in other cities or towns.

5. The use of comparable systems of accounting by the hospitals is a reasonable requirement and should be effected as soon as feasible.

6. All hospitals should recognize that the government authorities from which funds are received must make necessary inspections and will require reports of services and costs.

III. *The Per Diem Rate*²

Principles for the determination of the per diem rate of payment by public authorities to nongovernmental hospitals for the care of public charges. In the statement of general policy approved in 1937 by the governing bodies of the American Public Welfare Associa-

² Prepared by the Joint Committee, May 1938.

tion and the American Hospital Association, a major point (Number 3) was the following recommendation in regard to the method of payment to nongovernmental hospitals for the care of public charges: "It is the unanimous belief that such payment to hospitals should be on the basis of service actually rendered, and that payment in a lump sum or subsidy basis is undesirable." Descriptions of hospital programs in various sections of the country indicate that the per diem method of payment is most generally utilized. The summary of Nelle L. Williams' study³ of public welfare agencies and hospitals contains the following statement: "Though lump sum appropriations are still made direct to the hospital in a few places, it is significant that in two of the larger centers the hospitals and local officials report that these appropriations are the subject of discussion as to the possible desirability of discarding such arrangements."

Reports from both welfare and hospital sources show that problems such as the following have frequently arisen: (1) competitive bidding between different hospitals in the community to secure cases from welfare authorities; (2) selection of hospitals by welfare authorities on basis of low cost alone, disregarding quality to save money; (3) fear on the part of both hospital and welfare authorities that the other agency is attempting to drive a shrewd bargain; (4) disagreement between the welfare authorities and the hospitals as to what constitutes a "fair" rate; (5) dissatisfaction on the part of the welfare authorities when the method of payment allows "extra" charges in addition to a fixed per diem rate.

The principle of dealing cooperatively with the hospitals instead of bargaining with them individually was approved in point 4 of the statement of general policy previously mentioned: "Public welfare officials will find it advantageous to deal with the hospitals of their community jointly." There are also circumstances when several public authorities may have to deal with one hospital, as when a hospital in one county or township receives cases from neighboring jurisdictions which contain no hospitals. Point 5 in the same statement of policy emphasized the necessity for recognizing that good hospital service is increasingly complex and costly and that high standards for the care of patients are essential.

It must be recognized that considerable variation in the costs of care for patients will be found even among hospitals in the same community. Size, percentage of occupancy, the predominant type of medical service offered, the economic groups of patients served, and the inclusion of the costs of professional teaching or research all affect per diem costs. Since the cost of caring for patients with chronic conditions are, after an initial period, generally lower than for acute cases, public officials may expect to pay and hospitals may expect to receive a lower rate for patients who remain in a hospital longer than a certain period, such as sixty days. The difference between the acute and the chronic per diem rates and the determination into which category special cases should fall (irrespective of length of stay) should be matters of local negotiation. Measures for the control of length of stay and for the review of cases in which justification is questioned will have to be established in the interest of economy. Governmental authorities should appreciate that according to

³ Nelle L. Williams, *Public welfare agencies and hospitals*, Chicago, American Public Welfare Association, 1937.

accepted hospital practice, it is reasonable to compute length of stay as including the day of admission but not also the day of discharge or death.

Whenever locally feasible, patients should have choice among the hospitals which are available under the existing agreement.

Hospitals cannot expect that the governmental authority charged with the expenditure of public funds will pay rates based on the estimated costs of individual hospitals. Such a procedure would result in a different rate for each hospital, and local competition on a price basis. It is essential that a uniform rate of payment be utilized within a city, county, or other governmental area. A uniform rate for a whole state is not reasonable as conditions frequently vary widely among localities.

Because of differences in methods of cost accounting and in the allocation of overhead, the determination of the per diem cost of care is frequently difficult. This situation is particularly true in a hospital which offers varied classes of service. The adoption of uniform, or at least of comparable, methods of accounting is highly desirable. Under these circumstances the hospitals would be able to compute their costs on a similar basis. The system of hospital accounting officially adopted by the American Hospital Association can be commended to all hospitals. The services of sisters and others not receiving salaries but giving their full time to the hospital should be evaluated at a fair rate in determining operating costs.

The per diem rate should be a flat rate including all charges for necessary laboratory work, x-rays, special nursing, and other services. Exception may be made of a very few unusually expensive services which occur infrequently, such as blood transfusions. With this exception, the rate adopted should include all extra charges. Hospitals should recognize the great simplicity from the administrative standpoint made possible by a flat and inclusive rate. They should appreciate that the addition of special charges would require that governmental officials, in the exercise of their responsibility for expending public funds, would have to review many cases in detail, inspect hospital records, etc. A fair per diem rate may be considered as one which is neither as high as that of a hospital in which low occupancy or special services and procedures result in proportionately higher costs, nor as low as that of a hospital rendering a poor quality of service in which costs are below the average because of inadequate equipment and insufficient and ill-trained personnel.

The relations between state and local governmental authorities often need to be taken into account. In general, state authorities should recognize the differing local conditions which exist within most states, and should recognize and encourage agreements made by local officials with local hospitals.

The following principles have been drawn up as a guide for both public authorities and hospitals in the establishment of harmonious cooperative relationships and the determination of fair rates of payment.

1. The voluntary hospitals in a community should agree to act jointly in all negotiations leading to payment by governmental authorities for the hospitalization of public charges. Such joint action can best be achieved by a formal, or in-

formal, committee, composed of representatives of the various hospitals. In communities of sufficient size this may well be a permanently organized hospital council.

2. Public authorities, on the other hand, should adopt the policy of negotiating with hospital representatives as a group and should not treat with hospitals individually in setting the rates.

3. Public authorities should bear in mind that public charges are entitled to a high standard of care and that per diem rates must be high enough to permit this type of service.

4. Public authorities should recognize that hospitals cannot assume the responsibility of caring for public charges if the remuneration for that care is too small to enable them to maintain a satisfactory financial status.

5. Hospital authorities, on the other hand, must not expect the government to pay rates significantly higher than would result from the equipment and maintenance of beds for the same type of patient in a governmental hospital.

6. Community support previously received by hospitals, and the amount of free service given in the years preceding the arrangements with public authorities, should be taken into consideration in determining the per diem rates and the allocation of cases. Voluntary hospitals should continue to seek community support on the basis of charitable service supported from voluntary funds.

7. Each hospital should compute the costs of care for patients so far as practicable on a basis of computation which is similar to that used by the other hospitals in the community.

8. Extra services, with the possible exception of blood transfusions, should be included in the per diem rate.

9. The hospital representatives should agree among themselves on a tentative uniform rate which they should present to the public authorities as a basis for negotiation.

10. Governmental authorities, on the other hand, may be expected to request full information concerning the methods of computing costs which led to the establishment of the proposed rate.

IV. *Determining Financial Eligibility*⁴

1. Agreements concerning standards of eligibility for tax-supported care should be developed through local conference between public officials and representatives of hospitals and the medical profession. Maximum participation in working out plans and mutual exchange of full information are the best possible insurance against claims on the one hand that persons who could afford to pay are being authorized for care at public expense or, on the other hand, that essential hospital care is being unreasonably denied to needy people. Situations involving misunderstanding, duplicate investigations, and the like, need not arise if the whole plan of admitting patients as public charges is arrived at by conference between all interests and agencies that are concerned. Steps should be taken to keep individual doctors and agencies fully informed regarding all procedures, including local laws and the exact methods followed in determining eligibility.

⁴ Prepared by the Joint Committee, May 1938.

2. Need for medical care should be determined by the physicians.
3. Eligibility for care at public expense should be determined by the governmental agency responsible for payment.
4. Decision concerning financial eligibility for care at public expense should be reached after investigation and consideration of the following factors for each individual case.

(a) *Pertinent laws and ordinances.* The acceptance of an individual for public care necessarily depends upon his eligibility under the provisions in state laws and local ordinances, as well as upon his financial status. Local or state residence, for example, is often a prerequisite to assistance. Whether this assistance is rendered by state, by county, or by city authorities may depend upon the type of service required. It is important, therefore, that the laws and ordinances relating to public assistance be familiar to hospital personnel as well as to public authorities. The principle that poverty alone shall not deprive people of necessary medical care has been incorporated in the public welfare laws of many localities. Medical care is ordinarily provided for people who are unable to pay for such care at minimum rates without depriving themselves or their families of the basic necessities of life, and whose legally responsible relatives are likewise unable to pay for such care. Hospital care at public expense should not involve a pauper status, nor should eligibility for such care require a pauper's oath or its equivalent.

(b) *Budget sufficient to provide a reasonable standard of living, according to the size and composition of the family.* To determine eligibility in a way that is fair both to the recipients of relief and to the taxpayers, a carefully worked out budget should be utilized. It must, however, be recognized that an illness requiring hospital care often arises unexpectedly and that the costs of such illnesses cannot be covered by a budget which would be sufficient for all the regularly recurring or predictable expenditures of a family. The budget should be based upon the actual cost of meeting the reasonable requirements of health and decency in the particular community at a given time. It is essential that it be flexible, including the amounts required to cover essential needs for families of various sizes and age compositions. It is also essential that the budget be revised periodically as living costs change locally.

(c) *Family income and assets; liabilities and responsibilities.* The public official's problem of determining which persons in his community he can legitimately authorize to receive hospital care at public expense is not essentially different from his problem of determining people's financial eligibility for other essentials, such as food, shelter, and clothing; although all concerned must realize that in addition to the people who require general relief, there are others with incomes that render them self-supporting while in health but are insufficient to meet the costs of hospital care. The public official's decision as to whether a family has sufficient resources to meet a minimum budget should rest on a thorough social and financial investigation conducted by competent social workers. The investigation should include a reasonable check of all financial resources of the individual and the family, including not only current earnings but insurance, bank accounts, real estate, etc. An intelligent decision as to whether people can really meet their own essential needs, including hospital care, cannot be entirely subjected to rule-of-thumb methods. For example, the ownership of property is not by itself evi-

dence that a family can meet its own needs. This would depend upon the actual equity in property and whether money or credit could really be obtained. Likewise, ownership of an automobile may be necessary to the individual's employment or that of a member of his family.

It should be borne in mind, moreover, that exhaustive investigation may sometimes be more costly than the results would justify. Investigation by more than one agency should be avoided. When a responsible public official or voluntary social agency with acceptable standards has already determined that an individual is eligible for general relief, there can be no question about financial eligibility for hospital care at public expense.

(d) *Probable cost of the necessary diagnosis and treatment.* In order to determine eligibility for care at public expense it is necessary to take into account the cost of needed hospital care, including physicians' services if these are to be met by the patient himself. To this end, the physician or agency recommending hospital care should give the responsible public official as clear a statement as possible of the probable cost involved, based on the nature and probable duration of the illness and the kind and probable amount of treatment needed.

5. Hospital care at public expense should be authorized on an individual case basis by the governmental agency responsible for payment. As far as practicable, no patient whose care is to be a charge on public funds should be admitted to a hospital without the prior authorization of the public agency responsible for his support. Public officials should recognize, however, that bona fide emergencies occur which make prior authorization an impossibility.

Unless all details are prescribed by law, a procedure covering the admission of emergency cases should be worked out by joint conference between the public official and representatives of the hospitals and the medical profession. Such a procedure would probably call for notification of the public official within a fixed period after admission of the emergency case. The acceptance of such cases as public charges would depend upon the results of the subsequent investigation. Future misunderstandings can be avoided by working out a general definition of emergency care and reaching an agreement as to the types of cases which can justifiably be admitted without prior authorization. The question of whether an individual case is emergent is necessarily determined by the physician responsible for the patient.

A mutually satisfactory procedure should also be worked out for referring for investigation as public charges individuals who enter hospitals as pay patients but who cannot meet their payments because of unexpected duration of illness or for other reasons. In some of these cases, evidence may point to eligibility for public care. Such circumstances may call for the acceptance of these cases as public charges from the date of admission, subject to the results of investigation.

Whatever plan is adopted for referring cases already admitted, hospital authorities should be scrupulous in referring to public officials only patients who there is real reason to believe may be legitimate public charges. If the hospital should slip into the habit of routinely referring every patient who does not pay his own bill, the public official would

soon come to believe that his office is being used as a collection agency for the hospital. A help in avoiding this source of difficulty is the use of a reference form on which the hospital inserts the evidence at hand, pointing toward the patient's eligibility for public care.

Public officials should recognize that the hospital would be within its right in refusing to accept a case as a public charge if there is proof that a patient could afford to meet the cost of his own care on a private basis.

Hospitals and out-patient departments have had long experience in determining eligibility for free hospital and clinic care and have developed standards of determining eligibility which can be studied to advantage by public officials. A summary of these standards and of the outstanding studies of ability to pay the costs of sickness was published in 1928 as a report of the Out-Patient Committee of the American Hospital Association.⁵ The introductory section of this report also made reference to the standards of out-patient work adopted by the American Hospital Association in 1926 and quoted the following two paragraphs relating to the admission of patients:

In determining the admission of individual cases to an out-patient clinic, three factors need to be looked into with due consideration of local community conditions; namely, the income of the patient or family, the size and responsibilities of the family according to a reasonable standard of living, and the character and probable cost of adequate medical treatment for the disease or condition found.

The gathering of social and financial information necessary to determine admission under the above policy should be performed by a person with training in social work.

5. Cleveland's Credit Plan, by *E. L. Harmon, M.D.**

ORGANIZED as a direct result of the depression, the Hospital Finance Corporation of Cleveland has been in successful operation for four and one-half years. While a child of the depression, it has been so successful that it undoubtedly has achieved a permanent place for itself. The corporation was not started to collect hospital charges from patients unable to pay or to enforce collection ruthlessly from those able but unwilling to pay. The whole approach of the plan has been rather to obviate the necessity for subsequent legal action, to offer a deferred-payment service competently administered, to assist those patients genuinely deserving help, and ultimately to change public psychology on hospital obligations in general.

The need for such a service for the patient who, because of unforeseen circumstances, required time to liquidate his hospital obligation, seemed apparent. Every participating hospital had for many years been called upon to extend credit to such individuals. A certain number of patients who reasonably could and should pay for their hospital care over a period of time failed to do so. Many cases that appeared to be perfectly safe credit risks ulti-

⁵ American Hospital Association, Report of the committee on out-patient work (Bulletin 73), Chicago, the Association, 1928. Pp. 8-10 and 1.

* Adapted from *Mod. Hosp.* 51:51-53, July 1938.

mately would default or require legal proceedings. Often the same individuals would make great efforts to meet obligations for radios or other less necessary commodities. The merchant selling a radio could repossess the merchandise, whereas the hospital could not, and would not if it could. The hospitals wondered if the psychology of dealing with a central credit office would not tend to increase the patient's recognition of his obligation, at least in selected cases.

An added advantage arose from combining the clerical requirements for handling this type of account in one central office. Furthermore, each hospital had seen increasing numbers of its patients borrow money at high interest rates to meet hospital obligations. It was desired to assist such individuals in a manner that would safeguard the interests of the patient and the doctor as well as of the hospital.

With these objectives, a nonprofit organization was incorporated with nine trustees, at least five of whom must be administrators of member hospitals. It was intended that the other four should be hospital trustees or prominent citizens conversant with the needs of hospitals. The corporation was sponsored by seven Cleveland hospitals. A manager and secretary were employed to operate the offices of the corporation, located in a downtown building. The participating hospitals agreed to underwrite a six-month budget, allocated according to each hospital's in-patient earnings.

It was hoped that the income represented by interest charges on accounts financed ultimately would cover the operating cost. Six per cent interest on the total amount of the patient's obligation was expected. There is little justification for criticism of this rate in view of the fact that it is considerably lower than rates charged by commercial financing houses.

It was recognized that a rotating cash fund, with which to advance money to the hospital at the time the service was rendered, undoubtedly would stimulate a much greater usage of the service. After considerable discussion it did not seem possible to provide such a rotating fund. It was therefore planned to go ahead with the service and pay hospitals as the accounts were collected.

Before starting the service, letters were sent to the attending staff members of each participating institution explaining in some detail the purpose of the corporation. It was pointed out that the plan was not designed to enable the hospital to take care of patients totally without resources but was designed to make hospital service more readily available to the individual who could not pay his account in advance and to safeguard the interests of the hospital while reducing the expense incident to the collection of unpaid accounts. Consideration was given to including, when requested, the private physicians' or surgeons' fees. It was felt inadvisable to attempt such a step unless a specific request for the inclusion of this service should be forthcoming from the practicing profession. Consequently, no mention of this was made in the letter.

The physician was informed that any patient unable to finance needed care except on a deferred-payment basis, when referred either to the hospital admitting office or to the offices of the corporation, would be asked to execute an application for credit in an amount not to exceed the anticipated total cost of the type of service required. On this credit appli-

cation the patient would agree to execute a promissory note to the corporation, payable according to the terms specified in the note, and further to obtain the signatures of two responsible persons as security, or such other security as the corporation might deem acceptable. He also was informed that through the central office of the corporation a credit investigation would be made and the hospital then would be authorized to extend such credit if the case was an acceptable risk. He was told that there would be an interest charge of 6 per cent on the total obligation.

For emergency cases credit arrangements would be made after the patient's admission, through the admitting officer and some responsible member of the family. He was asked in non-emergency cases to have suitable patients either approach the hospital admitting office or the corporation offices directly to make the proper arrangements.

The plan accordingly was started June 1, 1933. The admitting officers and collection officers of the individual hospitals were made representatives of the corporation and were provided with the necessary forms. In general, it was believed that it would be more successful, when time permitted, for the patient to make his own arrangements at the central offices since greater stress would thus be laid on the desired psychologic element. The admitting officers were instructed that this plan should not prevent asking the patient to pay cash. All free and industrial injury cases were considered outside the scope of this service.

The forms provided consisted of a credit application, suitably drawn to protect the hospital's interests, and an information blank and credit acceptance form specifying the anticipated maximum amount of the obligation and setting forth the patient's financial information. A third form, authorizing the hospital to extend credit to the patient in the amount asked, was provided. Investigations include a checkup through the retail credit bureau, the files of the collection department of the Cleveland Hospital Council, and, on selected cases, the central investigation service of the hospital council.

Each of the member hospitals gave the corporation power of attorney to represent its interests in the collection of accounts due.

Admitting officers were instructed on the general plan of operation and meetings of the admitting officers were held from time to time to discuss problems.

At the end of the first six months, it was apparent that without increased usage the service would not be self-sustaining. A modified plan was therefore evolved whereby an annual membership fee of 25 cents per bed was charged each member hospital. This charge, plus the interest collected, was to be applied against the total operating budget. Any deficit encountered divided by the total number of cases handled during the six-month period gave a service charge per case. Each hospital would then pay this service charge for its total number of cases handled during the period. Thus the cost per case would decrease as the total volume of cases increased.

From the accompanying tabulation a steady growth of the service is apparent. Instead of the original seven member hospitals there are now twelve, all except two of the hospitals of Greater Cleveland that are eligible for membership. During the earlier years one of the original member hospitals withdrew from the plan, but within a year was reinstated. In

at least some instances pressure from patients has, in part, been responsible for nonmember hospitals obtaining membership.

TABLE I. TABULATION SHOWING GROWTH AND RESULTS OF FINANCE CORPORATION SERVICE

		<i>Number of hospitals participating</i>	<i>Number of accounts financed</i>	<i>Total amount financed</i>	<i>Amounts collected*</i>	<i>Expense budget</i>	<i>Service cost per case</i>
1st 6 months 6-1-33	1933.....	7	222	\$ 20,531.19	\$ 4,674.61	\$ 2,963.50†	....
2nd 6 months	1934.....	7	333	27,665.14	10,383.89	2,256.72	\$3.66
3rd 6 months	1934.....	7	292	23,893.93	14,545.62	2,353.97	4.23
4th 6 months	1935.....	8	316	24,086.97	15,407.34	2,405.63	2.93
5th 6 months 1-1-36	1935.....	9	558	37,059.53	23,685.21	2,991.71	1.88
6th 6 months	1936.....	10	685	59,263.60	30,384.18	2,685.76	.085
7th 6 months	1936.....	10	644	53,212.64	36,753.53	2,754.02	....
8th 6 months	1937.....	12	778	66,857.29	40,963.58	3,093.78	.19
9th 6 months	1937.....	12	790	69,955.35	43,613.19	3,418.05	.035
TOTAL—55 months		12	4618	\$382,525.64	\$220,411.15	\$24,923.14	

* This amount includes collections by attorneys.

† Includes nonrecurring item of \$440 for furniture and equipment.

Little effort has been made to publicize the service, except through keeping the individual hospitals and their staff physicians informed by periodic communications. This method and requests by patients have been the most satisfactory means of extending its use. Dignified folders outlining the plan, suitable for distribution to patients, are available to staff physicians. They also are used in the hospital admitting offices.

Advertising in the monthly publications of the local medical society was abandoned after a brief period as not particularly productive of results and as objectionable to some of the member hospitals.

Both number and volume of accounts financed are now nearly three and one-half times that of the first six-month period of operation.

Considerable variation in methods has been used in an effort to meet the wishes of the individual hospital. For example, in the earlier days of the plan some of the hospitals attempted to handle the details of financing through their own admitting officers acting as agents for the corporation. All hospital authorities have concluded that more satisfactory handling occurs and the patient responds better to his obligation when he has been sent directly to the organization offices.

In some instances hospitals, recognizing a case in which they would in all probability be rendering free service to the patient anyway, have requested handling such accounts through this service in the hope of realizing something on the account. Such efforts have been discouraged by the corporation and results have been naturally disappointing.

One hospital at present, because of certain unusual conditions, finances all accounts in which full cash settlement does not occur at the time of discharge without the corporation

offices having the opportunity of passing judgment on the acceptability of the account. This tends to build up volume and increase collection losses when the results are compared with other hospitals in which more selection is made. Even so, the hospital in question believes the service is useful in meeting its needs.

Study of the amounts collected shows the same continuing growth as the volume and value of accounts financed. There is apparent for each period of operation a lag between the amount financed and the total collections. This is to be expected because of the continuing growth of the service and the varying time commitments in individual notes. The build-up of financed accounts always will be from six to twelve months ahead of the payment time expectancy on the same accounts, until a period is reached when the volume of accounts becomes stable.

TABLE 2. COLLECTIONS BY ATTORNEYS

<i>Year</i>	<i>Amount</i>
1934	\$ 338.99
1935	1,379.30
1936	3,867.89
1937	5,377.60
Total	\$10,963.78

The total collections by attorneys represent only 2.8 per cent of the total amounts financed during the entire period of operation. Unfortunately, no accurate records have been kept for the entire period to give detailed information as to ultimate disposition of the difficult or dubious accounts. Such accounts have, of course, been accepted and their final destiny is always in the hands of the hospital concerned. In 1937 there were 290 accounts transferred to attorneys for collection, representing a total value of \$17,085. These figures cannot be compared with those representing number and value of accounts financed for the same period, as most of the accounts represent obligations incurred prior to 1937.

A more complete analysis of accounts outstanding and an exact collection efficiency figure are out of the question because of the limited office force with which the organization has been provided.

For the whole fifty-five-month period of operation, the expense totals 11.3 per cent of the amount collected. For 1937, however, the expense item represents only 7.6 per cent of the total collections. This figure was 18.5 per cent for 1934, the first full year of operation. In other words, over a four-year period there has been a 10.9 per cent reduction in the costs of handling these accounts, resulting largely from increased business.

As income to the corporation has increased from both interest and membership fees, the cost per case has steadily and rapidly diminished until for the last six months of 1936 there was no service charge. At that time the volume of work had increased to such an extent that additions to the budget were necessary. As a result, the service charge increased in the first half of 1937 and then dropped to the almost negligible amount of 3½ cents during the last half of the year.

This method of meeting operating costs has seemed fair and satisfactory to the hospital membership. Those of us in Cleveland who have been close to the work believe the corporation now has achieved an established and permanent place for itself in the hospital

picture. The usage and growth of the organization have exceeded the hopes and expectations of those who sponsored its original development. We predict a secure but unspectacular future.

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CHAPTER XVIII. FINANCIAL CONTROL

I. Hospital Accounting; Tool or Torment, *by C. Rufus Rorem**

MONEY talks, even in hospital affairs. The accounting records describe the status and activities of a hospital, just as definitely as the nurse who reports a patient's symptoms or the physician who explains the use of an x-ray machine or the processes of a surgical operation. Accounting is the language of economic activity, and every hospital administrator should acquire a reading knowledge. To be sure, the economic aspects of hospital service are not the only important phases of the institution. But they are inevitable aspects of hospital care. Consequently it is imperative that hospital administrators understand the significance of the economic transactions that underlie the professional services of their institutions. Accounting is a tool for controlling an enterprise involving economic transactions, and is applicable to both private business and nonprofit institutions. Accounting is not a "mass of figures"; it is a method of classifying and interpreting a single transaction or a group of transactions.

The accounting records are in the last analysis merely records of human relationships and activities, expressed in financial terms. For example, a nursing supervisor receives a semimonthly salary check. To the accountant this is the occasion for recording a reduction in the bank balance and charging the "Nursing Service" with the amount of the salary. But these entries in the accounts also represent—incompletely, to be sure—many hours of professional care and attention to innumerable details affecting the lives and health of patients. Let us take another illustration. A check is received from the ladies' auxiliary. The bookkeeper records an increase in the bank balance and gives credit for the money received through "Voluntary Contributions." But the accounting entry merely epitomizes the loyalty, anxiety, and labors of a group of women who have spent many hours in conducting a bazaar, soliciting contributions, or otherwise serving the institution.

Likewise every accounting record represents human effort, classified and ultimately summarized to report and explain the activities of his institution to the administrator. The accounts cannot record the skill of a nurse, the professional judgment of a pathologist, or the gratitude of a satisfied patient. But they can record the amounts paid for nursing care or laboratory service, or the amounts received from patients or other sources for these and hospital services.

Accounting, then, is not something for the hospital administrator to "leave to his bookkeeper." It is a method of control which is entirely within the administrator's comprehension and which he should learn to understand if he is to have complete knowledge of the institution he administers on behalf of patients and the public. A knowledge of accounting in hospital administration is as essential as knowledge of the language of a country where one travels or resides. Signs, gestures, and a puzzled expression will elicit a native's

* Adapted from *Mod. Hosp.* 43:37-39, Nov. 1934.

concern and willingness to help, but they indicate the tourist's confusion and helplessness. The administrator should be able to discuss financial problems in the language talked by accountants, trustees, patients, and contributors. There may be a few hospitals to which "money is no object," but they are as scarce as foreign countries in which everyone speaks English.

I am not advocating that every hospital administrator take his turn as bookkeeper. Nor do I suggest that superintendents give up the task of general administration and spend time in recording business transactions. But I do suggest that the accounting procedures are merely the extension of the superintendent's own activities and responsibilities. The accounting department is the telescope and microscope by which the superintendent views long-run effects and immediate influences; or—to change the metaphor—it is the camera by which he records the financial picture at a given time or a series of activities during a period of time. We can all enjoy a motion picture without being able to operate a camera or develop a film. Likewise we can enjoy a good novel without being able to write one. But we cannot enjoy a movie or novel without some understanding of the director's "continuity" or the author's vocabulary.

The hospital administrator usually is able to comprehend accounting better than he realizes. Once he takes the position that the accounts are for his use and not for the amusement of the bookkeeper, he has only to ask this question: What economic facts do I need concerning my hospital? It is then the accountant's task to produce them. There are cases in which the determination of certain facts might cost more than they are worth. But even such a conclusion involves judgment, and can be reached only after experience or careful analysis of the case. For certain purposes an administrator might ask his accountant to determine the exact costs of certain laboratory tests. If the process of determining these costs exactly proved to be very expensive, he might then decide that information concerning the costs of the laboratory services as a whole during a given period would suffice to make his decision.

The point I wish to make is merely this. The accounts have a function to perform. They are not merely an appendix to hospital service. Accounting records are adequate only to the extent they serve the administrator in the control of his own hospital.

One of the criteria of adequacy for hospital accounting is uniformity. Not all hospitals are identical. But their similarities are greater than their peculiarities. Each administrator must exercise general supervision of all departments. Likewise each institution involves dietary service, maintenance and repair of the physical plant, and the provision of certain household functions, such as laundry, linen service, and housekeeping. But a hospital is more than a hotel or rooming house. Consequently each institution must also provide professional services such as nursing, medical and surgical service, social service, medical records, x-ray, laboratory, and physical therapy. The foregoing functions are common to all hospitals, large or small, general or special, urban or rural, and they suffice for the classification of all hospital activities whether for in-patients or out-patients, medical or surgical cases, medical care or medical education.

Among hospitals there are variations. For example, one institution will serve mostly surgical cases, another will give convalescent care, and still another will accept only women's and children's cases. One hospital will employ a full-time roentgenologist, another will use the part-time services of a local specialist. One will face the problem of heating, the other of cooling. One will pay low salaries and provide maintenance of personnel, another will pay higher salaries and require or permit employees to live outside. One will have a nursing school, another will not. One will be occupied to less than half capacity, another will have cots in the halls. Such peculiarities affect the economic problems of hospitals, but not the accounting methods by which the economic problems are portrayed and interpreted.

A uniform system of accounting will suffice to record the activities of vastly different institutions. In fact, the greater the differences among hospitals, the greater the need for uniformity in the methods of recording and reporting their business transactions. Per capita cost (cost per patient-day) is the most discussed and least understood of all financial units of hospital activities. In a recent study of costs per patient-day, I found that reported costs varied greatly among institutions. At first I assumed the variations to result from peculiarities of the hospitals but found that they were explained by peculiarities in methods of calculation.

There are two elements in cost per patient-day, namely, the total cost and the number of patient-days. In some hospitals total costs are interpreted to include the costs of medical education, nursing education, out-patient service, interest on borrowed funds, depreciation on plant and equipment; in others these costs are excluded. In some hospitals the calculations of patient-days include the services to newborn infants, overnight guests or relatives of patients, and cases served in the emergency room; in others only adult patient-days are included. Obviously, such variations in measuring cost per patient-day tend to conceal the efficiency or special characteristics of the hospitals reporting the data.

The advisory committee on accounting of the American Hospital Association has completed a manual which suggests uniform definitions of hospital statistical and financial terms and recommend a standard classification of hospital assets, liabilities, capital income, and expense. It will suggest also certain practical formulas for calculating income and costs of hospital departments or units of hospital service. The manual will not be revolutionary in character; in fact it will merely codify the practices approved by careful students of hospital administration and the economics of medical service. The report is designed particularly for use in small institutions with a hundred beds or less, but with a view to permitting elaboration by executives of large hospitals. Throughout the manual, and in the classification, the committee has had in mind the needs of the administrator in controlling and managing internal affairs and in adjusting the hospital to the needs of patients and the public.

A number of superintendents will say, "My hospital is peculiar and no uniform system would suit my needs." And each hospital is peculiar in certain features. Moreover the American public should be grateful for the individuality of each institution, which expresses the personality of its administrator or sponsoring agency. But individuality or pe-

culiarity implies a comparison or contrast with other institutions, situations, locations, or periods of activity. These peculiarities are revealed most effectively through a common standard of comparison or measurement. Uniform records and reports do not hamper the activities or control of individual institutions any more than a uniform musical scale interferes with the composition of a great masterpiece. The very uniformity of accounting records and reports emphasizes the differences in hospital activities and permits of the proper control. It must be remembered that accounting data are tools made for the use of the administrator. Skillful use of them will increase the service rendered by the personnel and facilities under his direction and will justify his stewardship of community resources. For accounting is made for administrators, and not administrators for the accounts.

2. In a Small Hospital Uniform Accounting Is Helpful, *by C. Rufus Rorem**

THE professional services of a hospital all rest upon an economic foundation. The serving of a meal involves the cost of food and the wages of cooks and kitchen help. The making of a bed requires the service of a nurse or an attendant. The examination of a laboratory specimen is dependent upon expensive reagents and the skill of a salaried technician. Each x-ray film or treatment increases the electricity bill for the month. A shovelful of coal in the heating plant may be the difference between safety and danger for a case of pneumonia. Thus we may say that each errand of mercy is directly or indirectly connected with the receipt or disbursement of cash. Conversely, each economic transaction contributes, or should contribute, to the relief of humanity. Hospital service is a group of professional procedures with an economic background. It is also a group of financial transactions with a professional objective. It is impossible to ignore either aspect of the service.

Why, then, have hospital administrators given such slight attention to the financial problems of the hospital? Why is it that a woman who will study medical case histories for hours will shrug her shoulders with disgust or impatience when the bookkeeper asks her advice or assistance concerning the same patient's financial case history?

I think the answer can be found in one or both of the following conditions. First, many physicians, nurses, and clergymen (who comprise the group of small hospital administrators) are idealists, accustomed to dealing with charitable rather than business transactions. Their experience has been that of dispensing rather than financing charitable service. They are accustomed to rely upon rich patients or contributors to meet the costs of the important charitable services they provide. The community has perpetuated the idea of the hospital as a charitable institution, and it has only been within recent years that large numbers of the medical profession and self-supporting population have used the institution, not only as a center of public charity but as a center of professional activity.

The second disturbing factor in the situation is that financial records possess for most human beings an air of mystery and confusion. "How," says an intelligent nurse superintendent, "do you expect me, who can never reconcile my personal bank account with my

* Adapted from *Mod. Hosp.* 45:54-56, July 1935.

check stubs, to understand or maintain the financial records of a hospital? Accounting is a mystery to me. I leave it to the initiated." I contend that any intelligent administrator who sets his mind to the subject can understand the financial records and reports of his hospital. Moreover, he can exercise reasonably good judgment regarding their efficiency or sufficiency, and determine whether the professional procedures are adequate in amount or quality, considering their economic basis.

Let us be specific. Hospital care costs money. What is money spent for? The expenditures for hospital operations can all be classified in one of three categories: (a) personal services of hospital employees; (b) supplies or equipment used by the hospital, such as flour, coal, soap, bed linen, stationery; ethylene, x-ray films, hypodermic needles; (c) the services of personnel or property not part of the hospital, such as law firms, insurance companies, or light and power plants. Such a classification of expenditures is important as a matter of record, but does not reflect the purposes for which the expenses are incurred. It would be comparable to a medical case record in which were carefully listed the time spent by doc-

TABLE I. STATEMENT OF INCOME AND EXPENSE IN A LOCAL GENERAL HOSPITAL FOR
THE YEAR ENDED DECEMBER 31, 19—

Net income from patients		\$55,700
<i>Operating expenses:</i>		
Administration	\$ 6,200	
Dietary	12,600	
Housekeeping	4,200	
Laundry	3,800	
Plant operation (heat, light, power, water)	5,500	
Maintenance and repair	4,900	
Medical and surgical service	8,100	
Nursing service	7,700	
X-ray service	1,500	
Other special services	1,620	
Total		56,120
Excess of operating expenses over net income from patients		420
<i>Nonoperating income:</i>		
Individual contributions	950	
Community chest	1,840	
Endowment income	800	
County government	1,800	
Total		5,390
<i>Nonoperating expense:</i>		
Interest on mortgage	3,750	1,640
Net gain for year		\$ 1,220

tors and nurses and the amount of gauze or medicine consumed, but which included no record of the diagnosis or the progress of the disease.

The American Hospital Association's recent report on uniform accounting entitled *Hospital Accounting and Statistics*, published May 1, 1935, recommends the grouping of operating expenses under the various functions performed in the hospital, such as administration, dietary, medical and surgical service, and nursing. Under these classes are recorded the amounts expended for personal services, supplies, and the miscellaneous services of outside agencies. Table 1 contains ten categories of operating expenses. They may be subdivided or combined according to the needs of the administrator. The main requirement is that all operating expenses be recorded and reported under classifications which indicate their purposes.

Let us look for a moment at the classification of hospital income—a more cheerful subject. The main sources of hospital income should be differentiated in records and reports and may be expressed as patients, volunteer contributors, governments, and invested funds. A report of hospital income should reflect the amount from each source. The administrator may wish for a further subdivision, particularly in terms of the various services rendered by the hospital, such as board and room, operating room, laboratory, but these are merely refinements of the general idea. No hospital report is complete without a summary of assets and liabilities. An adaptation of the hospital balance sheet recommended by the committee on accounting appears as Table 2.

What about cost per patient-day? Like the weather, everyone has talked about it, but no one has done much about it. The advisory committee on accounting has recommended a standard procedure for determining this item, so that hospitals can compare their experi-

TABLE 2. BALANCE SHEET OF A LOCAL GENERAL HOSPITAL FOR DECEMBER 31, 19—

<i>Assets:</i>		<i>Liabilities and capital:</i>	
Cash	\$ 1,000	Accounts and notes payable ..	\$ 2,800
Accounts and notes receivable ...	7,440	Mortgages payable	75,000
Supplies (inventories)	2,400		
	<hr/>	Total liabilities	77,800
Total current assets	10,840		<hr/>
	<hr/>	Working capital	8,040
Endowment funds	16,000	Endowment fund capital	16,000
	<hr/>	Plant capital	172,000
Land	7,000		<hr/>
Buildings	208,000	Total capital	196,040
Equipment	32,000		<hr/>
	<hr/>	Total	\$273,840
Total plant assets	247,000		
	<hr/>		
Total	\$273,840		

ences with other hospitals or periods of time. Cost per patient-day is the average cost of caring for an in-patient for one day, based upon the total costs and the total number of patient-days during a period of time. The total costs should include only "operating expenses" as defined by the American Hospital Association. The total patient-days should also be calculated according to the standard definitions. The method of determining the cost is shown in Table 3. Differences in cost per patient-day do not necessarily represent

TABLE 3. COST PER PATIENT-DAY; AVERAGE FOR YEAR ENDED DECEMBER 31, 19—

Operating expenses	\$56,120
Patient-days	
Adults and children	13,254
Infant-days	1,004
Total	14,258
Cost per patient-day (excluding infant-days) ($\$56,120 \div 13,254$)	\$4.23
Cost per patient-day (including infant-days) ($\$56,120 \div 14,258$)	\$3.93

differences in business efficiency. They may indicate merely differences in quality or complexity of a hospital program, in wage levels or price levels in a community, or in percentages of occupancy during a period of time. But cost per patient-day is a convenient and useful index of hospital activity.

Finally, what should this article mean to a physician, nurse, or former clergyman administering a small hospital? Merely this: An understanding of hospital financial transactions is fundamental to hospital administration, and is within the capacity of any intelligent administrator who will concentrate on the problem. These transactions can be expressed only in accounts and accounting reports. The recent report of the advisory committee is intended to help toward this end. The report need not necessarily be adopted or rejected in detail. Like the multiplication table, it is a subject for study rather than argument. An administrator will find much in the report which can be applied to his own institution by himself or his accountant.

A superintendent should occasionally ask his bookkeeper to explain the financial accounts. If she cannot explain them, he may rightly suspect she does not understand them. The experience will be worth while for both administrator and bookkeeper and may lead to clearer understanding of the relationship that should exist between the economic and professional aspects of hospital care.

3. Cost Concepts of Hospital and Nursing Administration, by *Charles A. Rovetta**

IN view of existing confusion between economists, accountants, hospital administrators, and members of the nursing profession in regard to costs, it might be well at the outset to

* Adapted from *Hospitals* 12:56-60, July 1938.

defend two simple assumptions: that hospital institutions are distinct economic entities although operating as nonprofit enterprises; and that being distinct entities, they are subject to administrative guidance. If the first statement were not true, there would be no basis for separating from all facts those which pertain specifically to a given hospital: if the second statement were not true, there would be no pronounced need for cost data.

If it is agreed that hospital entities are subject to administrative guidance, then it follows that for purposes of control it is essential to know costs. Since hospitals have attempted cost studies in the past and have attempted in many instances to compare results, it is imperative that problems allied with the measurement of these costs be isolated, articulated, and classified. As I see it, difficulties of determining costs from the accounting aspect may be grouped into three major classifications: problems of determining the total value of all assets consumed during the entire life of the institution; problems of allocating portions of that total value consumed to the various fiscal periods; and, finally, problems of allocating the expenses attributed to each fiscal period between the different functional activities performed during that time.

The problem of determining total value of assets consumed is complicated in turn by changing price levels, and by differences of opinion over including in "Cost" all assets which have been donated. The orthodox accountant has attempted to overlook the effect of changing price levels by insisting that the historical acquisition price be used. Yet, even though such a principle of valuation were universally used, final results would not be comparable. If two hospitals, for example, are using identical equipment purchased at different prices, the identical service will cost more to that hospital which bought at higher prices. Yet the two costs computed on the historical acquisition price would not be comparable in evaluating current operations. Assume also that in an attempt to establish comparable cost results, it was agreed that all donated assets would be excluded in determining costs. Final results would still not be comparable because of the varying proportions of donated assets to total assets among the different institutions. Hence, comparability in this respect can be attained only by including in total cost all donated assets. Such items of course can and should be kept separate.

The accountant does not assume full responsibility for solving this first group of problems outlined. Generally they are assigned to other professions for solution. In evading responsibility for the determination of total value, but in assuming responsibility for the fiscal allocation of portions of that total, three authorities within the past few years have commented as follows in stating principles of guidance:

Accounting is essentially the allocation of historical costs and revenues to the current and succeeding fiscal periods.¹

Accounting is not essentially a process of valuation, but the allocation of historical costs and revenues to the current and succeeding fiscal periods.²

¹ Prize essay, G. R. Byrne, *Journal of Accountancy*, Nov. 1937.

² A tentative statement of accounting principles by the American Accounting Association, *Accounting Review*, June 1936.

The division of the life of a business enterprise into fiscal periods has created the problem of determining the income of the enterprise for each fiscal period. This determination is a most important task of accounting. . . . All income and all expenses should be correctly allocated to the periods to which they apply.⁸

In two of the three statements a definite commitment is made for the use of actual historical price as against replacement or reproduction price. In none of the statements of principle has there been established criteria to eliminate doubt concerning the identification of certain portions of expense with the current period. The amount of expense involved in the area of doubt is relatively small in commercial enterprises of quick turnover and small fixed investments; but in hospitals, with slow turnover, large fixed investments, and rapid obsolescence, the amounts are large. The method of attacking the difficulties lies in the use and acceptance of double-entry accrual accounting. However, accountants are forced to admit that measurement of the accrual of certain items of expense is so difficult that they are overlooked and the inexactitude excused on the basis that the items will balance out after the first year.

Briefly, two groups of problems have been presented: those of determining total value and those of distributing this value as consumed to fiscal periods. There still remains the third group of difficulties: those of allocating the expense of the fiscal period to the different functions performed by the hospital during that period. Nursing costs will be more closely related to this last group of problems than to the first two groups discussed. However, the first two, in deciding the total cost which must be distributed, have just as important an influence in deciding nursing costs as have the problems of dividing the total expense between the many activities of the hospital. Yet space does not permit more adequate treatment of the ramifications involved in the first two groups of problems discussed. The remainder of this discussion will be devoted to problems associated with allocating total hospital expense of a fiscal period between all the activities performed.

Most previous cost studies of nursing service and nursing education have overlooked the significance of the problems associated with total cost and fiscal expense determination. Moreover, these former studies of nursing service and nursing education may be classified into two categories: those which attempted to measure unit performance in terms of financial "cost," and those which measured unit performance in quantitative statistical terms. In the latter instance, only a partial answer is provided for hospital and nursing administrators, for the relative performance in terms of financial efficiency cannot be ascertained as between periods of time, or as between institutions. In other words, such procedure does not recognize the fact that different hospitals may provide the same quantitative and qualitative service at different cost; or that the same hospital may provide the same service at different costs; or inferior service at the same or higher cost, as at different periods of time. In the former case, financial "cost" is ascertained, but it is in no way related to service provided. Furthermore, in many of the financial cost studies to date, procedure of calculation

⁸ T. H. Sanders, H. R. Hatfield, and U. Moore, *A statement of accounting principles*, American Institute of Accountants, p. 25.

and component elements of cost are undefined, thus complicating the task of interpretation even more.

It is true that writers in the field of hospital and nursing accounting have taken great care to present in detail the various technical procedures necessary to secure proper classification and allocation of expenses. But the explanation of the nature of cost as a concept has been omitted, even in books just released. The reasons for this omission are difficult to explain, especially when the concept of "cost" changes in kaleidoscopic fashion. Cost is a word circumscribing a group of ideas, or a concept of complex nature. Arbitrarily defining such a word is a useless procedure. What is needed is a development of a "thought-image."

Four closely associated terms, "expense," "loss," "cost," and "profit" should be differentiated. The central idea in the cost concept is that of giving up or parting with something of value to acquire some other thing, service, or value. When the term "cost" is used, it usually refers to the total outlay incurred for goods or services. The term "expense" should refer to that portion of such outlay allocated to a certain fiscal period. Thus the essential problem of expense determination is one of "timing." A "loss" as differentiated from a cost represents outlays for which no corresponding returns were received. In contrast, it is to be noted that cost is incurred for the purpose of, and is accompanied by, the securing of some other value. When the value received is greater than that which was given out, the excess is "profit." Profit, like expense, is measured in terms of accounting periods.

In cost accounting there is distinction between "expense" and "cost" in that cost figures are calculated by reclassifying and assigning expenses of a fiscal period to "cost units." Cost, as used technically, is that portion of the expense charge which has been assigned to a particular unit of production, service, or administrative "cost-unit" of a fiscal period. The sum of the individual expense items allocated to each cost-unit is the cost of that unit. All such allocations of expense are made to cost-units on some basis.

However, the process of allocating expense to cost-units is not a singular or a fixed and stereotyped routine. The process varies greatly, and it is this important fact about cost procedure that calls for further consideration. By varying these processes of allocation, one may compute different costs. In order to know which procedure to use, it is essential to know the conditions under which costs are being measured and the purpose for which they are intended. This is as it should be, for there is no one cost which can be used for all purposes, any more than there is one wheel which fits all watches, automobiles, or wheel-chairs. Thus it is apparent that the purpose determines the cost concept, which in turn determines the cost procedure.

From the many types of cost concepts recognized by accountants and economists, four types are of particular significance in a study of nursing service and nursing education. These are: average costs, avoidable costs, alternative costs, and standard costs. Each type will be examined before the final selection is suggested.

Average Costs. Nursing cost studies in the past have employed average cost techniques almost exclusively, with, in some cases, misinterpretation of results in terms of avoidable

costs. Average cost is the total expense divided by units of service output. Such a cost assumes that an equal amount of cost is incurred in the production of each of a given lot of similar units. Let us suppose, for example, that a hospital serves 1,000 meal units per day at a total "cost" of \$320 per day. Two hundred of these meals are served to student nurses who constitute the entire bedside nursing staff. The "average cost" of the meal or unit of service output is the total cost of \$320 divided by 1,000 meal units, which gives 32 cents.

Almost all hospital administrators rely entirely upon data developed by average cost techniques. The advantage of average cost procedure is its apparent simplicity. Its serious limitations may best be developed in terms of the other types of costs mentioned.

Avoidable Costs. As distinguished from average cost, avoidable cost is the additional cost involved in producing an additional lot of output, assuming that the previous lot would be produced. As related to nursing education, avoidable costs would be those costs which would be eliminated if nursing education were abolished by a given hospital.

Let us suppose that the hypothetical hospital in the average cost illustration given above plans to give up its nursing school and replace the 200 students by 100 graduates. On the basis of average costs one could conclude that the meals served to 200 student nurses cost \$64 and the meals served to 100 graduates cost \$32, so that by abolishing the school the hospital saved the amount of \$32 daily on meals. However, the replacement of student by graduate nurses would not produce the saving stated for the following reasons.

An analysis of expenses in the above situation should have disclosed that some costs were constant and did not fluctuate in proportion to production, that some were partly fixed and partly variable, and that some expenses varied directly with production. Examples of fixed charges connected with meal service are depreciation of equipment, telephone service, and, in all probability in the instance cited, the wages and other expenses for cooks would remain unchanged and, therefore, should be included in the "fixed charges" classification. Examples of variable costs are the waitress item since fewer of these workers would be necessary to serve 100 than 200 nurses; and the replacement costs of raw food. Actually, the only items which should have been included in the cost of the 100 meals eliminated when the school was closed are the variable costs associated with their service. In general, the smaller the units of output, the smaller the number of items of expense that can be eliminated. In the above instance only ten per cent of the meals were to be eliminated. Hence an analysis accurately made would have resulted in retaining in the "constant" expense classification many items that might become variable when larger percentages of output were to be eliminated.

Alternative Cost. The concept of alternative cost as applied to hospitals tends to emphasize the alternative means available for providing a given service. Thus, for the maintenance department of a hospital, the concept has usefulness in deciding whether it is more economical to generate rather than to purchase electricity from public service companies. In nursing, the concept finds application in deciding whether to provide bedside nursing care by employing graduate nurses as against providing the service by utilizing student nurses in training. It is to be noted that this concept indicates a means of comparing the

cost of alternatives. It presupposes that *both* costs are known, but in no way indicates the content of the two costs. Thus, it is possible to use "average" or "avoidable" techniques in computing the cost of service as rendered by student nurses for comparison with some arbitrary cost imputed to a similar service rendered by graduates.

Standard Costs. The fourth concept—standard costs—has received marked attention in industrial accounting but has been relatively neglected in hospital accounting. The precise definition of standard costs varies, but in general it includes the idea of a continuous basis of comparison. Another aspect of standard costs is that they are prepared in advance; in this respect standard costs are closely related to the fiscal budget although not necessarily identical with it. Standard costs offer the advantages of requiring that the operating plans of the institution be carefully considered in advance, and that proposed expenses be reviewed. When the program is in operation the standards established will subsequently serve as a mark at which to aim, will stimulate criticism, and will call attention especially to unsatisfactory performance.

A hospital may evaluate performance by using data of the hospital itself; it may study the performance and positions in terms of another hospital; or finally it may establish definite standards and evaluate actual performance with planned performance.

It is interesting to note that in the industrial field standard costs have had a parallel development with time and motion studies. The recognition of the significance of time and motion studies has created a realization of the need for standards which might be applied to performance and which would provide a basis for comparing, evaluating, and relating the results of cost analyses with quantitative output. The lack of such standards in hospitals is probably the reason why standard costs have not been more extensively developed in these institutions. Indeed, standards underlying nursing costs have either been entirely absent or so woefully haphazard that they may have actually jeopardized the nursing care given to patients. Dependence upon historical comparison within the same institution or upon comparison with other hospitals has been widely practiced. In the former instance, the result was often *a comparison of inefficiency with inefficiency*; in the latter instance, *a comparison of unlike conditions and services*. To an analytical minded administrator, such comparisons would immediately raise the question of the cause of any differences. The development of standards for administrative control would avoid both consequences, and cost comparisons would consequently assume significance.

Avoidable Cost Suggested as a Base. From the point of view of hospital and nursing administration the most significant information can be developed by costs based on an "avoidable" concept. If it is assumed that a hospital is operating with a nursing school, then the cost to that hospital for nursing education is the cost which could be eliminated if the school were abolished. Likewise, if the hospital were operating without a school, the cost of the school to that hospital would be the additional costs incurred with the incident of the nursing school.

From the point of view of internal administration the avoidable cost concept places emphasis on the costs which tend to fluctuate more widely with current operations. By elimi-

nating from emphatic consideration those costs which are more constant and less sensitive to administrative control, one can more equitably evaluate managerial ability. All too frequently expense analyses emphasize consideration of fixed charges over which administration has relatively little control. Thus, by the avoidable cost concept, costs are placed into two categories: those which tend to be subject to administrative control, and those which are apt to be more rigid under fairly narrow ranges of operating capacities.

Another advantage is that the avoidable cost concept develops costs which are accurate for use in policy formulation in terms of alternative possibilities such as the substitution of graduate for student service, the abolishment of meal privileges for graduates, the elimination of living accommodations for graduates, and, contrariwise, the addition of any of these services or items. It is worth repeating with emphasis that average costs for policy formulation are apt to lead to erroneous conclusions in terms of eventual cost behavior.

Any study of nursing costs should give full recognition to all variables which affect nursing costs. The factors must be measured both in financial terms and on a basis of quantitative and qualitative nursing service rendered. The detailed procedures of accomplishing this are inappropriate to discuss at the present time. Suffice it to say that the technique used must give recognition to all the problems of the specific concept of cost selected. If this is successfully accomplished, the results will be intelligently useful costs for:

- a. Evaluating management, because emphasis is placed on those costs which tend to vary and which are within the control of the nursing and hospital administrators.

- b. Deciding how much of the funds of a hospital are actually being used to finance a nursing training school or how much of the funds of a nursing school are being used to finance a hospital. The best evidence that a cost is being incurred for a nursing school is the proof that the cost would be eliminated if the school were abolished. Likewise, it cannot be argued that a hospital is incurring a nursing education cost if that cost were to persist or increase even though the school were abolished.

- c. Reaching decisions by the public as to the institutions most capable of effectively providing for nursing education.

To me personally, no concept of cost should imply that "cost" is the sole basis for deciding policies of nursing service and nursing education. Neither should emphasis on the necessity for accurate costs indicate that effort should be entirely one of reducing those particular "costs." In fact, accurate costs computed on the basis of an avoidable concept may show the provision of funds for such an important activity to be lower than necessary to maintain current standards. Exceedingly low and inadequate nursing costs thus might well become a source of serious concern and a warning for intelligent hospital investigation.

In the field of nursing education, the order of the day is a shifting emphasis. More and more that emphasis is placing nursing education in a category apart from the hospital. If the hospital wishes to carry on nursing education, it should recognize it as a joint activity, co-equal in importance with that of caring for the sick. As joint activities, every attempt

should be made to safeguard the standards of both. Coordination is essential of course, but that coordination should take place at the level of the board of trustees in the management hierarchy. Such an organization will encourage the further development of a philosophy of nursing education along a fuller, broader curriculum of study rather than along narrow lines of vocational training. Nursing education will then be accepted not only as training for a profession, but, more important, as a way of life. And what other fields of education can offer so much for the individual and for the welfare of society?

In conclusion, may I summarize by outlining the steps to be taken in the determination of costs acceptable for use. Chronologically, it is necessary to accomplish the following: develop possible concepts of cost applicable to nursing education and nursing service; select the concept of cost most useful for present purposes; suggest procedures and methods for determining the financial cost as evolved by the accepted concept in a simple, inexpensive, and understandable manner; relate financial costs so determined to standards of performance and variables so that reliable interpretations of results may be made.

This discussion has dealt briefly with only the first of these objectives. In developing the concept of cost, recognition was given problems associated with: (1) determination of total value of all assets consumed; (2) distribution of portions of that total to each accounting period; (3) allocation of the expense of each accounting period among all the activities performed during that period; (4) the intelligent use of costs so determined.

The problems are grave but not insurmountable. Concerted thinking and work by both hospital administrators and members of the nursing profession will shortly evolve a cost—acceptable—accurate—helpful.

4. Nursing an Endowment, *by John C. Mackenzie**

AN endowment fund or foundation is that portion of the hospital's funds which is subject to trusts attached by the donors, the interest only to be used; the capital to be kept intact. In no instance and under no consideration may the principal itself be used for any purpose whatsoever.

Where gifts or bequests come to the institution without specific attachments they may be disposed of in one of three ways: (a) placed to the credit of the general endowment fund, when the total amount will be invested in securities to produce revenue for the hospital, the capital being kept intact; (b) used for the purchase of such capital assets as buildings or plant equipment with the capital amount kept intact by funds set up for replacement; (c) credited to the surplus account to which operating deficits may be charged. It should be the policy of the institution to dispose of unmarked bequests in the first of these three ways. When gifts are left unrestricted, it is usually the assumption of the benefactor that such monies as he leaves will go to swell an endowment fund, and this belief, though not stipulated in the deed of the bequest, must be carefully considered in the disposition of the bequest. Some institutions have a rule that any donation over a certain amount

* Adapted from *Mod. Hosp.* 46:47-50, May 1936.

goes to swell the general endowment fund. Once an endowment always an endowment must be an inviolate rule.

Endowments fall into two main categories, general or unrestricted and restricted or specific. The revenue derived from the first is to be used for any interests of the hospital to aid in offsetting the operating expenditure. On the other hand, revenue from the restricted class can be used only for the specific purpose for which the endowment was given. It is obvious that the most acceptable type of endowment is unrestricted and if opportunity allows it should be suggested to a donor that he give his bequest to the general endowment fund of the institution rather than assign it to a specified purpose. This allows more elasticity in utilizing the revenue.

Bequests or legacies accruing to the endowment funds should be valued at their market value on the date they are placed to the credit of the endowment fund, and this value becomes the book value for future definition. Only in exceptional circumstances, as, for example, the aftermath of the 1929 debacle, may the book value be written down; otherwise it should remain as originally entered. It is unlikely that a situation will arise to warrant the writing up of the book value.

Persons who are charged with the administration of such a fund must realize that they are acting in a trust capacity and that they have imposed on them two principal obligations: (1) to invest the principal of the fund so that the maximum annual benefit will be derived consistent with safety; (2) to expend the annual benefit derived in accordance with the donor's instructions if specific instructions be given, or for general purposes. There is seldom any requirement, however, that the total revenues or benefits be expended in any one year and it is often desirable that the revenues of the fund be accumulated. This, however, does not change the obligation that the revenues eventually be used for the expressed wishes of the donor and for no other.

A drive for a specific endowment fund, such as for the nursing school, should be made on the grounds of the merits and needs of that specific project. The virtue and necessity of endowments for the department or function must be definitely laid down and clearly demonstrated to those who are philanthropically inclined. The procurement of such an endowment will depend largely on how adequate those intimately associated with the department can demonstrate a need for the added revenue. The whole plan for present and future requirements, as far as can be foreseen, should be carefully studied beforehand and the capital sum so arrived at made the objective of the drive.

The call for initiating general endowment funds or increasing them should be continuous. The best way to sustain this continuity is to have the hospital's reputation as a good hospital always before the public. The general public should be kept constantly informed of the high standard of work that the hospital performs and how it fulfills its responsibility to the community for charitable work. Information in respect to accidents or unusual cases with the beneficial results obtained should be freely supplied to the press, who are always willing to publish a story which contains real news. There should be the fullest co-operation between the hospital and the press at all times.

The annual report should give a full and complete picture of the year's work of the institution, through both written reports of the officers and department heads and statistics that show the work of the hospital in general and in particular departments. Stress should be laid upon the amount of free and part-pay work done, with the consequent incurred deficit. An effort should be made to interest the members of outstanding law firms in the community in the need of the hospital for endowments, for when wills are being made opportunities sometimes arise for making suggestions along these lines.

Every effort should be made to interest public bodies, clubs, and societies in the activities of the institution. Volunteers from such bodies as the Junior League should be encouraged to work in the institution or in one of its departments. This may be done by volunteer work in the social service department, in the outdoor clinics, or as a set project of the League. There has been in operation for a number of years at the central division of Montreal General Hospital a canteen which provides lunches to free patients waiting over for afternoon clinics. Such a canteen can also charge those able to pay for the meals provided and the profit derived may be donated to the social service department.

Volunteers can also be invited to attach themselves to the social service department for case work in company with one of the regular social service workers. In this way the volunteer's interest is aroused not only in the cases she may visit but also in the general needs and necessities of the underprivileged. These volunteers are given an insight into the living conditions of free or part-pay patients. The importance of this cannot be too greatly emphasized. By means of her contacts the volunteer can and will tell those who are in a position to aid the hospital financially of the work it is doing for the relief of the sick poor, and though it may be a "long shot" toward increasing the endowment fund one can never tell where the "back-fire" will come.

In approaching those financially able to assist an endowment fund the fact that they may perpetuate their own names or the names of deceased relatives or friends should be kept in mind. This has a strong appeal to a certain type of person and probably its scope is broader than we care to recognize. Acknowledgment of such gifts may be made by the erection of suitable plaques or by engraving the names of benefactors, with the year and the sum donated, in a conspicuous place.

It is of the utmost importance that the personnel of the hospital always recognize that a patient is a patient, no matter what his financial status may be outside the hospital. By treating all patients with sympathy, tact, courtesy, and understanding the hospital is going a long way toward making friends of those patients. Patients in the public wards can play their part in obtaining financial aid to the endowment fund, because, in this topsy-turvy world of ours, he who is poor today may be rich tomorrow. Furthermore, the poor patient may, by word or action, express to some wealthier person his enthusiasm for the work of the institution concerned and in this way influence the latter to become interested and give willingly of his funds.

It is a vital necessity that the hospital be recognized in the community as a good hospital. This can be achieved only if the hospital is actually so in deeds and results. Not only must

the community be proud of the hospital but the entire staff must impress the community with the fact that they know it to be a good hospital. Often the attending staff may have an opportunity to encourage rich patients to donate funds to the hospital. The aid and influence of the medical staff should be sought, therefore, toward this end. The selection of outstanding men in the community as members of the board of directors gives the institution its hallmark and those men by their influence can do much toward increasing the funds of the hospital.

The general endowment fund can be constantly augmented by means of procuring life governors whose initiation fees should be credited to that fund and their subscriptions added to the general revenue of the hospital. Constantly increasing the numbers of life governors augments the endowment fund and the revenue of the hospital and also serves to promulgate among the members of the community the name of the institution.

A finance committee of the directors or the board of management should administer endowments. The men comprising this committee should be chosen for the diversity of their interests, knowledge of business conditions, and ability to render sound advice on business problems. They are responsible to the board of management for the whole financial set-up of the hospital and should hold meetings regularly, reporting to and obtaining the approval of the board of management for its actions. Much of the work of this committee will devolve upon the honorary treasurer or, if the institution is large enough, on the paid full-time treasurer. He will be responsible, under the direction of the committee, for surveying the business affairs of the institution and preparing the budget and financial reports. The finance committee will be responsible for investing endowment funds in sound securities, constantly surveying the portfolio of investments, and selling those which in the committee's opinion should be reinvested. In a paper on the administration of endowment funds, Raymond L. Thompson, University of Rochester, said:

A summary of the financial and business situation is usually presented and discussed as related to a monthly summary of our endowment assets, which sets forth both graphically and in tabular form the trend of endowment income, the fluctuations in market values as related to book values, as well as average yields at market values—all this information diversified by types of investments. As a corollary to this tabulation, we present the changes in market values by classifications of investments, the fluctuations in the average rates of income by types of investments, the profits or losses taken upon security sales during the month and a report indicating all purchases and sales of securities.¹

It is evident that the system in vogue at the University of Rochester is a comprehensive one, much more comprehensive than could be profitably adopted by the smaller institutions for whom this present paper is written. Mr. Thompson does, however, point a way in which all endowment funds should be administered. His statements may be summarized as follows: One of the first objectives of any finance committee must be to define an invest-

¹ Care and administration of endowment funds, *Proceedings of the Conference of Trustees of Colleges and Universities on the Responsibilities and Problems of the Governing Boards of Educational Institutions*, Apr. 1935.

ment policy: just what type of investment is the institution going to purchase? When the institution is governed by the trustees act of the province concerned, the nature and the type of investment will be clearly defined, but where the institution is not subject to such restrictions the policy must be determined. In formulating such a policy the committee has two main objectives. First of all, a security which is within stable limits and not liable to fluctuate, and secondly, a security which will give as great a return in the way of dividends as possible. In adopting the policy the committee should give every consideration to a general plan of diversification of investment.

Diversification should be part and parcel of the finance committee's policy, not only in types of the same classification but also in various classifications, as for example into industrials, utilities, railroads, financial, government, and realty, thus obviating the danger of losses that may come in the swing from prosperity to depression in any one particular classification. A suggested ideal arrangement made by an investment house in New York is as follows: bonds 50 per cent, preferred stock 10 per cent, mortgages 20 per cent, common stock, real estate, and miscellaneous 20 per cent.

If the committee invests only in first class government or allied bonds, as pointed out by Doctor Warriner, a trustee of Lehigh University, it is accepting but a small share of the responsibility with which it is charged, for the reason that the income from an investment of this kind would probably produce, except in the case of a heavily endowed institution, insufficient income to meet its budgetary needs. In furtherance of this statement it is interesting to note that a composite fund made up of the investment of thirty colleges having 74 per cent of all investments of endowment funds of over \$50,000,000 is: bonds 49 per cent, preferred stock 7 per cent, mortgages 13 per cent, common stock and miscellaneous 29 per cent. The amount invested in equities (common stock and miscellaneous) in some colleges and universities is as follows: Lehigh, 7 per cent; Lafayette, 9 per cent; Yale, 50 per cent; Harvard, 30 per cent; Pennsylvania, 40 per cent; Swarthmore, 10 per cent; Princeton, 24 per cent; Columbia, 13 per cent.

The funds for investment should be divided into long-term and short-term securities so that certain securities can always be in a liquid state in order to take advantage of favorable business conditions as they may arise. In the selection of securities for investment, advantage should be taken of information supplied by such statistical organizations as Moody's, Poor's, or Standard Statistics. A finance committee should also agree that there should be set up in the books of the institution an investment reserve fund. To this fund is credited such profit as may be made by selling any investment. Similarly the losses developing from the sale of securities will be charged to this fund and it should be the particular function of the committee to keep a balance. This naturally demands that the committee keep a vigilant eye on the portfolio, for vigilance is rewarded by safety.

The committee should not consider its function and duties completed when it purchases first class bonds. Such a committee is not accepting its full responsibility. The procuring of as high a rate of interest on its investments as can be obtained is equally its responsibility in order to produce as great a revenue as possible for the institution.

To aid the committee and rid the institution of onerous detail, it is advisable to hand all the securities for safekeeping over to a trust company which for a moderate fee will cut the coupons, collect the dividends and interest for the account of the institution, and make recommendations to the committee covering the retention or sale of securities in the portfolio. The final authority and responsibility, of course, must rest with the committee and on their judgment depends to a great extent the welfare of this trust.

It must be recognized that no matter how strong an institution or its finance committee may be, it cannot be expected to withstand fully all the conditions that have presented themselves to the financial world in the past three or four years or, for that matter, that may present themselves in the future.

5. A Flat-Rate Payment Plan that is Working Successfully, by *Ada Belle McCleery**

THE favorable reaction of doctors and patients and the satisfactory results it has produced for the hospital make the flat-rate payment plan used at Evanston Hospital, Evanston, Illinois, a subject worthy of study by other hospitals. The inauguration of the experiment was preceded by a lengthy and exhaustive study of patients' attitudes and patients' bills. What follows is an account of the inauguration and progress of the plan.

We had never given much thought to the importance of the patient's attitude toward his bill. If our thoughts had been put into words they would have expressed our conviction that hospital charges were more or less uniform and that the patient should meet his hospital bill in the same manner he would meet any other unexpected expense. But the wide publicity given to medical costs made us realize that the correct attitude of the patient is tied up with a consciousness, on his part, of fairness in all financial dealings. In order to find out more about this relationship between hospital and patient we decided to make a study of it. Since we were to confine the study to an individual hospital it was necessary to settle upon some point at which to begin. Accordingly we began with patients' accounts, keeping in mind three things: analysis of accounts, complaints about accounts, and the reaction of the group paying without protest.

First, all accounts for a period of six months were investigated, room and board being separated from special charges. The accounts were thus individualized. A review of thousands of individual accounts causes a hospital executive to change his point of view. He sees operating room and x-ray fees in the same light as the patient instead of as a statement of earnings. The grand total of special charges, or extras, for the individual patient gave the superintendent a feeling of chagrin and a desire to hide under her desk. If the reaction of the patient paying without protest was similar, one discovery, at least, had been made.

Assuming that the attitude of this group had been disclosed, the hospital authorities were led to a second conclusion: that practically all complaints were associated with the fees for extras. If this were true, it seemed natural to assume that special charges, or extras,

* Adapted from *Mod. Hosp.* 41:73-75, Sept. 1933.

act as an irritant because they are beyond the control of the patient. The room and board charge is the only charge under the control of the patient. After deciding upon the type of accommodation desired, the patient is subject to the doctor's orders for whatever may be necessary in the way of diagnosis and treatment. The jolt comes when the bill is presented. And, because it is the hospital, not the doctor, that collects this swollen bill, its collection may cause strained relations between the hospital and the patient. The more we studied this complex situation the more we wondered if the practice of passing on to the consumer both the cost of technical equipment and the expense of the personnel necessary for its operation was justified. We could see no other method for meeting this expense except huge endowments, since both the original investment and the upkeep required cold cash. The question then was to find some means whereby misunderstanding might be eliminated and good will fostered, without the hospital's making too great a financial sacrifice.

From the beginning our thinking had been stimulated by the many references heard in hospital meetings in regard to a flat-rate charge. We had reached the point where such a plan seemed desirable, although we were not convinced that it was feasible. We made an estimate of what our income would be if we abolished all special charges and increased the per diem rate. This estimate was presented to the executive committee of the board of directors, who discussed it with interest but postponed action. However, some good seed must have been sown for when the proposition was again submitted about two years later, together with a recommendation that the plan be undertaken as an experiment, it was accepted.

The plan was simple. All patients, whether in a ward or in a private room, were to be given any service, special nursing excepted, that the attending doctor considered necessary without extra charge. The increases in rates were as follows: beds in the contagious disease department 50 cents a day; all other beds \$2 a day except for the newborn, no increase being made for this group. The minimum fee for tonsillectomies was fixed at \$10.

When the experiment was initiated there was no attempt to gain publicity through the public press. For information only, a letter explaining the plan was sent to every doctor who used the hospital, stating that an experiment which might be terminated at any time was being undertaken. When the plan was inaugurated it was felt that six months would prove whether it was a success or a failure, but at the end of that time general conditions were so abnormal as to make it impossible to draw fair conclusions. There was, however, abundant evidence that the plan had met with the favor of both patients and doctors. Because of this it was decided it would be unwise to change the policy without further study and a longer period of experimentation.

The first year of the experiment ended on April 30, 1933. At that time, in order to determine the actual results of the experiment, a thorough study was made of 500 accounts. These accounts were selected at random. Care was taken, however, to have all departments of the hospital as well as a large number of doctors represented. The study covered accounts for both adults and children, and practically all branches of medicine were represented. Seventy different doctors were "at the helm" of the five hundred accounts.

From the first, two bookkeeping records had been made for each patient; one, covering the day's care, was sent to the patient; the other, covering all special services at the former extra charge, was kept for the hospital's information. This method added greatly to the bookkeeping load, but it made conclusions specific and informing. "Profit" or "loss" as used in the following paragraphs has no reference to actual cost but is merely the result shown when the old rate is compared with the new. For instance, under the old rate Patient A, who was in the hospital for twelve days, was billed for twelve days at \$4 a day. The charges for special services, however, were as follows: laboratory, \$3; x-rays, \$25; operating room, \$10; anesthetic, \$10; or a total of \$48 for special services, making his total bill \$96. Under the new rate Patient A was billed for twelve days at \$6, or a total of \$72. Thus, the patient saved \$24 and the hospital suffered a "loss" of the same amount.

Of the 500 accounts analyzed, 452, or 90.8 per cent showed a hospital "loss" and a patient "profit" of \$11,558.38. These "losses" ranged from 50 cents to \$177.15, the average being \$25.57. The hospital "loss" was more than \$100 in 1.4 per cent of the accounts. The minimum hospital "loss" was \$107.31 and the maximum was \$177.15. Although 2.6 per cent of the accounts had special charges of less than \$5, in 4.2 per cent of the accounts the special charges were over \$100, the highest being \$343.31. This was the largest account of the 500 studied. The patient was hospitalized 106 days at \$9 a day, making a total of \$954. The hospital "loss" amounted to \$131.31. The patient tapped all of the resources of the hospital, not once but many times.

The hospital "profited" in only 48 instances, or in 9.2 per cent of the accounts studied. The total "profit" was \$591.27, as compared with a "loss" of \$11,558.38. These "profits" ranged from 25 cents to \$59.74, and averaged \$12.31. In 89.5 per cent of the accounts studied the "profit" was under \$25 and in 60 per cent of the accounts the "profit" was under \$10.

The greatest number of days spent in the hospital by any one patient was 106. The average hospitalization was 10.14 days, although 20 per cent of the group had a stay of one day only. The smallest account was \$4.50, and 6.2 per cent of the patients had accounts of less than \$10.

Two things should be taken into consideration in reviewing the experience of Evanston Hospital: first, the equipment for special services is already installed, and since the personnel is not usually required to work to capacity the only actual extra expense is the cost of the supplies used; and second, it is impossible to determine how many of the patients entered the hospital because of the rate revision. At all events, the first upturn in earnings in many months came shortly after the experiment began, and, although April 1932 was on the old plan and April 1933 on the new, the earnings were greater for the latter month. The hospital authorities still refer to the system as an experiment because they believe that it will take a longer period of time under more normal conditions to prove its worth.

The doctors like the plan because they are not restricted in the use of aids in studying and treating a patient. Several members of the medical staff have expressed their personal appreciation. The doctors have cooperated well. Although certain services have been uti-

lized which probably would not have been used if the patient were required to pay an extra fee, sound judgment has been used by the doctors in ordering extras. Only in isolated instances has unfair advantage been taken of the privilege. Tribute is due to the high honor of the hospital's physicians and surgeons.

Patients approve the plan. Their approval is based upon the fact that the cost hurdle is taken in one leap, rather than upon the specific rate per day. There is still a steady demand for the hospital's best accommodations, as well as for those available at popular prices. One patient expressed his approval as follows: "I believe the change was the wisest thing the hospital ever did. It is a great satisfaction to know just what one is really paying for hospital services."

The hospital likes the flat-rate plan because it gives the patients a square deal and because complaints seldom are received regarding an account. We believe that the finest thing of all is the good will that is being built up in the community.

6. Cleveland Likes Inclusive Rates, *by John R. Mannix**

THE University Hospitals of Cleveland have completed five years of experience with an inclusive rate system. This system has been so successful in its operation and so well received by the medical profession and the public that a review of our experience may prove of interest to hospital administrators.

Inclusive rates for certain types of hospital service, namely tonsil and adenoid service and maternity service, have been in effect for some years. The present day-rate charge used by most hospitals is in itself a limited inclusive-rate system covering room and board, general nursing service, and services of the resident staff. Hence the inclusive-rate system which we adopted is, in effect, but an elaboration and extension of the existing systems to include all services furnished to in-patients.

Some hospital administrators to whom we have described the inclusive-rate plan have had, on first consideration, the feeling that the plan is unfair to the patient who is rendered a limited amount of special service but who pays the same rate as another who receives a greater number of such services. This unfairness, if it may be so called, is no more imminent in this plan than under the present day-rate plan and is less imminent than in a group hospitalization plan. No one contests the fairness of group hospitalization, which distributes the cost of all hospital service among all members of the group even though many may not be hospitalized; this would seem adequate proof of the underlying soundness of an inclusive rate plan which provides only for the distribution of the cost of special services among those who actually are hospitalized.

Five years ago the general opinion was that inclusive rates were desirable for certain special types of services, but not practical for use in the majority of hospital cases because of dissimilar needs of the patients and varying lengths of stay. Early in 1932 a number of factors caused us to study the possibilities of an inclusive-rate system and this study con-

* Adapted from *Mod. Hosp.* 50:48-50, Jan. 1938.

vinced us that it was possible and desirable to develop such a system for all types of cases. The principal contributing factor leading to this analysis was the conviction that the "day rate plus charges for special services" method penalized the paying patient inasmuch as the physician, thinking of the cost to the patient, often hesitated to order needed special services. Yet all necessary special services were ordered for the nonpaying patient inasmuch as the physician was not required to consider the cost to this group. Because of this, we had previously increased our day rate and discontinued all charges for laboratory services so as not to suffer loss of income.

The second consideration was the criticism from physicians and patients who felt that our charges were excessive. Consideration of individual cases convinced us that the principal cause for criticism was not that the charges were high in themselves, but rather because a long list of special charges to the occasional patient made them seem high. Our charges for special services were not high in comparison to cost or to charges made by other institutions. In fact, they were low as a result of the hospital having followed, over a period of years, a policy of adequate day rates with minimum charges for special services. We were convinced that if the medical profession and the public would think in terms of a single charge for a given type of service in a particular accommodation for a given length of time, they would realize that such charges were not excessive. For example, we believed that the public would realize that a charge of \$125 for major surgery in private room accommodations was not excessive, whereas, on the other hand, a rate of \$10 a day plus extras would seem large to the patient, particularly if the number of special services required were abnormally high.

In developing our original inclusive-rate system, we set up rates for the six principal types of services: medical, pediatric, obstetric, minor surgical, major surgical, and diagnostic. The rates were based on two factors. The first replaced our former day-rate charge; the second factor replaced our former charges made for various special services.

TABLE 1. ORIGINAL INCLUSIVE RATE SET-UP

TYPE OF SERVICE	CHARGE
<i>Day rate (first factor):</i>	
Semiprivate room	\$ 6.25
Private room, Group A	10.00
Private room, Group B	12.50
<i>General services* (second factor):</i>	
Medical	\$ 5.00
Pediatric	5.00
Minor surgical	10.00
Major surgical	25.00
Obstetric	25.00
Diagnostic	20.00

* Charged on first day only.

In setting up the rates for the first factor, we attempted to establish new rates that would net us approximately the same income as we received from the former day rates, but at the same time we felt that it was wise to reduce to a minimum the number of different classifications of rooms. The rate of \$6.25 for semiprivate rooms replaced former charges of \$6 and \$6.50. The rate of \$10 for private rooms, Group A, replaced former charges of \$9, \$10, and \$11 per day. The rate of \$12.50 for private rooms, Group B, replaced former rates of \$12, \$13, \$15, and \$16 per

day. There had been a limited number of, and little demand for, the \$15 and \$16 rooms. We reduced the number of groupings of rooms at this time from nine to three.

In developing the second factor, we studied the charges made on the old basis for special services to 100 cases in each of the six groupings mentioned above. We then proceeded to set up charges for the second factor which were slightly less than the average charges made under the old system. Following the method described above, we set up a basis of charges for an inclusive-rate system that would net us approximately the same income per patient as we had received under the system of day rate plus charges for special services.

From comments we have received, there seems to be an impression among some hospital administrators that the inclusive-rate system is a system of reduced charges for hospital services. There is, however, no reason why an inclusive-rate system cannot be developed to net any desired amount of income. This income may be equivalent to, higher or lower than the "day rate plus special charge" system.

When the inclusive-rate plan was made effective, on August 1, 1932, the patient had the option of choosing the inclusive-rate method or the "day rate plus extras" method. Because the public had had no opportunity to become acquainted with the new system, it seemed unwise to discontinue the system of charges to which they had been accustomed. There was the possibility that the new system would not receive favorable acceptance by the medical profession or the public. For this reason it seemed advisable to continue the old method of charges until such time as the new method received complete acceptance. Admitting officers were instructed to explain both systems to the patients and to give them free choice. During the first week, 72 per cent of the patients chose the inclusive-rate system; during the first month, 78 per cent of the patients chose this system, and at the end of three years, 92 per cent of all patients were choosing the new method. It was at this time, on July 1, 1935, that we decided to discontinue the old method of charging for special services to in-patients.

The original inclusive-rate plan has been revised three times during the last three years. Each time we have made a slight increase in rates to cover increasing costs. We also gradually have reduced the number of rates for the various services from six to two. We now

TABLE 2. REVISED INCLUSIVE RATES AFTER FIVE YEARS

TYPE OF SERVICE	CHARGE
<i>Day rate (first factor):</i>	
Semiprivate rooms, 4 beds	\$ 5.50
Semiprivate rooms, 2 beds	7.50
Private rooms, Group A	8.50
Private rooms, Group B	10.50
Private rooms, Group C	12.50
<i>General services* (second factor):</i>	
First day	\$ 8.00
Second, third, and fourth days	5.00
Fifth, sixth, and seventh days	3.00
Total for seven days or more	32.00
<i>Obstetrics</i>	
First day	\$10.00
Second and third days	5.00
Total for three days or more	20.00

* All types except obstetrics.

have one rate for all general services including medicine, pediatrics, and surgery, and a second rate for obstetrics. The system followed remains much the same and still consists of two factors. The rates for obstetrics are \$12 lower than the rates for other services. This is due to the fact that for a number of years it has been the policy of most hospitals in the Cleveland area to keep obstetric rates at a minimum.

The semiprivate room of four beds is a new type of accommodation and was not available in 1932. The private room, Group A, is also a new type of accommodation and was not available in 1932. The new private rooms, Group B and Group C, are the former groupings A and B.

It will be noted that the special charge (second factor) has been considerably increased since 1932, especially on the medical and pediatric services. It also will be noted that the amount of the second factor is now charged over a period of several days, whereas under the original inclusive-rate plan the amount of this factor was charged all on the first day. When the inclusive rate was revised to apply to different types of service, it became necessary to spread the total amount over a period of several days, otherwise it would have been impossible to make the same inclusive rate apply, for instance, to major surgical and minor surgical cases. It will also be noted that the charge for semiprivate two-bed rooms has been increased, primarily because of a general increase in hospital costs.

It is our belief that it is possible to adjust rates in the light of fluctuating costs much more easily when the inclusive-rate method is in effect. With the "day rate plus special service charge" system in effect, there is inclined to be unfavorable reaction to any increase in rates whether the increase is in the day rate or in the charges for certain special services, but there is less unfavorable reaction when the charge for the total service is increased. For example, in our case, the charge for ten days' major surgical service in a Group B private room, which in 1931 was \$125, is now \$137. We had no adverse reaction whatsoever to this change, but had it been a matter of increasing our room rate \$1 per day or increasing our operating room charge \$10, we probably would have had an unfavorable reaction. No advantage should be taken of this fact and every effort should be made to keep charges in line with cost.

It will be noted that in revising our charges, the principal increase was made in the case of medical, pediatric, and diagnostic services. This was done for two reasons. First, the inclusive-rate system is essentially a method of dividing the cost of special services among all patients irrespective of the use of these services by the individual patient. We found it necessary in the beginning to set up six different rates for the principal types of services largely because, in the past, there was a great difference in the charges made for various services and the public and medical profession had been accustomed to paying considerably lower charges for medical and pediatric services and considerably higher rates for surgical services.

It was our plan eventually to charge all patients the same amount for service for a given length of time in a given type of accommodation, and we did intend gradually to revise our rates with this thought in mind. It was our original thought, therefore, eventually to

reduce the rates for major surgical and obstetric services and to increase the rates for medical and pediatric services. However, increasing costs of salaries and commodities forced us to make a comparatively large increase in the charges for pediatric and medical services while we made a comparatively small increase in the charge for major surgical service. The charge for obstetrical service, when the room rate and special service charge factors are considered, is approximately the same as in 1932.

A second factor which led to the comparatively large increase in charges for medical and pediatric services was the increased use of various special diagnostic and therapeutic facilities by physicians caring for medical and pediatric cases. This is true particularly of x-ray and general laboratory services, but to a lesser degree is true also of the electrocardiograph, metabolism, and physical therapy services. While most of this increase was justified in light of the needs of the patient, there has been some abuse. Such abuses, while annoying, are more than offset by the increased availability of special service to all patients, many of whom otherwise might be deprived of an important service because of cost. The increased use of the various special services results in some increased expense to the hospital but, inasmuch as most of the cost in the special service departments is overhead expense, the additional demands made upon the department generally result only in a slight increase in the cost of supplies and the total increase in cost is negligible.

Two years ago, when we made our first adjustment in our inclusive-rate system, we decided to develop an incentive for the payment of cash. We did this by increasing the day rate factor in the system 50 cents per day and then granting a discount of 50 cents per day to all patients who settled their account in full before discharge. This method greatly increased our percentage of collections. During the year 1935, we collected 96.5 per cent of all charges, and in the year 1936 we collected 96.7 per cent of all charges.

One of the advantages of the inclusive-rate system is that it greatly reduces the amount of bookkeeping on patients' accounts. Whereas the "day rate plus special service charge" system requires the billing of every charge for special service, this is eliminated under the inclusive-rate plan and only one amount, which is the sum of the two factors, is billed for each day of service. We make no attempt to allocate any percentage of the second factor in the charge system between the various special service departments such as operating room, x-ray laboratory, and physical therapy. We do not believe that there is any more value in such a breakdown than there would be in arbitrarily breaking down the day rate and assigning a certain percentage of the income to room, board, or general nursing service.

The inclusive-rate plan has become popular with the medical staff. It enables the physician to discuss with the patient, at the time hospitalization is recommended, the exact cost of hospital service. When the "day rate plus special service charge" method is in effect, the patient often delays necessary hospital service because of the uncertainty of the total cost. It also eliminates worry on the part of the patient, as a result of the uncertainty of such costs, and lessens the pressure often exerted on the physician for an early release from the hospital. The physician is able to obtain for his patient all essential special service without concern as to the cost of such services and whether or not the patient can afford them.

Hospitals should offer in-patients a complete service rather than a group of disconnected, unrelated services, and should develop a rate system that is consistent with the completely integrated service rendered by the modern hospital.

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CHAPTER XIX. LEGAL ASPECTS

I. Hospital Law and Legal Relationships in General, by William H. Spencer*

HUMAN society is merely an organized way of living and working together. Business, which in the minds of many is almost coterminous with human society, is a pecuniarily organized scheme for producing and distributing goods and services which human beings wisely or unwisely want. For the accomplishment of its objectives, human society and business have developed much complicated machinery and many types of social institutions. Important among these institutions is, of course, the hospital. The tender, merciful services and ministrations of these honorable institutions are perhaps in the minds of most people justified solely on humanitarian grounds. That they may be justified on this ground I do not deny, but in this connection I wish to point out that one could, if one were forced to do so, justify their services on the purely mercenary ground that physical well-being attained through the prevention and cure of human disease is, in our pecuniarily organized scheme of things, an economic *sine qua non* of inestimable value. It is a national asset without which we could not carry on an effective economic life. And if I may be permitted to utter an *obiter dictum*, hospitals and the medical profession must sooner or later come to a realization of the necessity of selling, through high-class salesmanship and well-organized advertising campaigns, physical and mental well-being as a national asset to the American public as it has never been sold before.

Now it is as absurd to think of this vast complicated society functioning without some form of control as it is to think of the heavenly bodies pursuing blind and unregulated courses in space. Control is indispensable to the smooth working of human society. To the extent that these forms of control function ineffectively, or to the extent that some break down completely as some have during these dark years of depression, the human family suffers.

Many different agencies of social control operate in human society in the regulation of its members, institutions, and machinery. Some are unconscious. Some are formal, some informal. Without attempting to classify them, mention may be made of customs, conventions, imitation, ethics, public opinion, fraternal organizations, labor unions, trade associations, the family, the church, and the state. The management of a hospital, as a human institution, must or should have an awareness of the force, scope, and operation of all these various forms of social control.

Of all these various forms of control shaping the management of human enterprises, whether a manufacturing establishment or a hospital, law, an instrumentality of the state, stands out most prominently. It is formal in its pronouncements. It is conscious in its operations. It is more or less drastic in its penalties. It is universal in its appreciation. It is as powerful or as weak as the state which stands behind it. In my discussion, I propose to

* Adapted from *Bull. Am. Hosp. A.* 8:21-32, Jan. 1934.

sketch in broad outline the law as an agency of social control, particularly in its relationship to hospital management. But may I, in this connection, emphasize the fact that legal minutiae, as important as they are to the hospital administrator, are not as important as a certain point of view—that after all, law is merely one form of social control; and that there are others, many of which are much more subtle and significant to the hospital administrator than law itself?

The term hospital is derived from the Latin word *hospitalis* indicating a relationship to a guest, and historically was an institution for the shelter and entertainment of travelers and strangers. In time, of course, it has come to mean an institution for the care of the sick and injured. In law, hospital is not a technical term; legally it carries substantially the same meaning as it does popularly.

In law, hospitals are said to be either public or private. A public hospital is one which is established and financed from public funds. It is in a sense a municipal corporation, or an agency of one. It continues to be such even though it receives some private support and donations. A private hospital, on the other hand, is one which is established and financed by private funds. The fact that such an institution receives some financial aid from state or city does not, however, alter its character as a private institution. A private hospital, even though it has facilities, is under no legal obligation to minister to the needs of all who apply for care and treatment. A public hospital, however, like any public institution, such as a municipally owned water, light, or power company, must within the limit of its facilities and services treat all members of the political unit which it represents in substantially the same manner. A public hospital, like a public school, may make reasonable charges for its services. Its charges, however, must be fair, impartial, and non-discriminatory.

A more important distinction is that between a charitable and a noncharitable or profit-making hospital. This distinction is important, first, because in all states, I think, a charitable hospital, as an educational or any other eleemosynary exempted institution, is to a greater or less extent exempted from the payment of taxes; and second, because to a considerable extent, the liability of a hospital for the negligent conduct of its servants and agents depends upon whether it is a charitable or noncharitable institution. Whether a given hospital is a charitable or noncharitable institution depends upon the construction of its charter. In one case the court says:

The law requires that if the corporation is organized for pecuniary profit, it must set forth in its articles the amount of capital stock, and the number of shares into which the same is divided with the amount of each share, which shall not exceed \$100.00. This the defendant did by stating its capital stock to be \$100,000 divided into 1000 of \$100.00 each.

The court said that this was decisive of its noncharitable character, remarking that the principal features of charitable corporations are "that they have no capital stock, and that their members can derive no profit from them."

The mere fact that the hospital charges for its services does not fix its character as a non-charitable institution. In a Missouri case, the Court said:

It appears from the pleadings in the present case that the whole object of the institution is charity. Nobody connected with it can derive a profit from the work carried on there; any profit [Court should have said *income*] is applied exclusively to the charitable purposes of the institution, and every part of the building is used exclusively for a hospital. The object being clearly charitable and exclusively so, we are unable to see any reason for holding that the purpose is not purely charitable, within the meaning of the law.

Apparently a majority of courts take the view that hospitals conducted by industrial firms for their employees are charitable in character, although from the point of view of an industrial firm conducting one it is negatively carried on for profit in so far as early and adequate hospital care of sick or injured employees reduces costs of management, and in so far as such attention tends to lower the amount of damages or compensation to which employees are entitled for injuries "arising out of, and in the course of, their employment."

A hospital, in the absence of some statutory prohibition, may be carried on either by an individual enterpriser or by two or more persons as partners. More commonly, however, hospitals are conducted in corporate form. The power to create corporations, whether for profit or nonprofit, resides in the legislative branch of the government. In modern times, legislatures in the exercise of this power have passed various types of general incorporating laws, in terms of which eligible persons may, under the general supervision of some administrative official of the state, incorporate. In most states there is a general law providing for the incorporation of business enterprises and another general law providing for the incorporation of nonprofit institutions. In Illinois, hospitals and other eleemosynary institutions may be incorporated under a law which in part provides:

Societies, corporations, and associations not for pecuniary profit may be formed by three or more persons, citizens of the United States, who shall desire to associate themselves for any lawful purpose other than for pecuniary profit, and who may make, sign, and acknowledge articles of incorporation and file them in the office of the Secretary of State, stating their title, the location of the office by street and number, the particular business or object for which formed, the number of trustees, their names and addresses. Thereupon the Secretary of State will issue to the signers a certificate of organization which must then be recorded in the office of the recorder of deeds in the county in which the organization has its principal office.

Similar laws exist in practically all states. In some the determination of charitable purposes is left entirely to the officials with whom the articles of organization are filed. In other states, as in New York and Massachusetts, the purpose must have been investigated and approved by some administrative board such as a Board of Charities. I am informed that in states where such approval is necessary, the preliminary investigation is usually of a rather perfunctory character. In a few states, particularly the older states, the statutes under which charitable institutions may be organized place a limit upon the amount of property which an eleemosynary institution can hold. These provisions are a survival of the mortmain statutes of England which were enacted at a time when Parliament feared that

unless something were done to check the trend, title to all the land in the kingdom would eventually rest in the Church.

The articles of incorporation or organization usually vest the management of the institution in a board of trustees, directors, managers, overseers, or whatever they are called in a given jurisdiction. These officials exercise their managerial powers by formulating general policies and by delegating their administration to ministerial officers, such as managers, supervisors, and superintendents. These officials, within the limits of the by-laws adopted by the overseers for the management of the institution, may redelegate their authority to sub-officials of their own choosing.

The physical location of a hospital frequently presents an embarrassing legal problem. In states where zoning statutes have been enacted and held constitutional, the problem is solved to a considerable extent on a general basis. Aside from such statutes, the matter of the physical location of a hospital is determined or limited by the common law doctrine of private and public nuisances.

A nuisance has been defined as a "wrong arising from an unreasonable or unlawful use of a house, premise, or property to the discomfort, annoyance, inconvenience, or damage of another." There are relatively few property uses which are nuisances per se. But a property use, perfectly lawful in itself, may become a nuisance if it is carried on at an unreasonable time, in an unreasonable manner, or at an improper place. There are several cases, for instance, in which courts have held that it is improper to establish and operate a lying-in hospital in a strictly residential section of a city.

Whether the location of a hospital in a given place is a nuisance is a question of fact to be determined in the light of the time, manner, and place of the operation, and the nature of the community in which it is located. Indicative of the general attitude of courts with respect to the location of a hospital is this statement from a North Carolina case:

It is not a sufficient answer to a person whose property has been injured or destroyed to say simply that the act complained of was done in the exercise of the police power for the preservation of public health. It cannot be said, no matter how comprehensive the power, that a municipality might locate a pest-house in the midst of a thickly settled neighborhood, or that the power to erect a pest-house carries with it the further power to locate it at a place where it will injure others. . . . And in determining whether there has been a proper or an unwarranted exercise of discretion in locating a pest-house at a particular place, regard must be had to the location itself, the present necessities of the particular case, and other pertinent facts and circumstances.

Of great concern to hospital administration is the matter of taxation. Every sovereign government enjoys the inherent privilege and power of taxing persons, property, and activities within its jurisdiction for the purpose of raising revenue to establish and operate those things, the operation of which cannot safely be left to private enterprise, such as furnishing highways, harbors, police protection, and fire protection. Accordingly we start with the fundamental principle that all persons and property should bear their equitable por-

tions of the cost of government. But all governments for one reason or another, sometimes good and sometimes bad, have lightened the burden of taxation of some persons and property, and in some cases have entirely exempted them from contributions to the financial support of public undertakings and services.

For reasons of policy all states to a greater or less extent exempt the property of charitable hospitals from taxation. The Constitution of Illinois provides that "the property of the state, counties, and other municipal corporations, both real and personal, and such other property as may be used exclusively for charitable purposes, may be exempted from taxation, but such exemption shall be only by law." Under the authority of this constitutional provision the legislature of the state has enacted a statute which provides that "all property of institutions of public charity, all property of beneficent and charitable organizations, whether incorporated in this or in any other of the United States, and all property of old peoples homes, when such property is actually and exclusively used for such charitable or beneficent purposes, and not leased or otherwise used with a view to profit" shall be exempt from taxation. Similar constitutional and other statutory provisions exist in other states for the benefit of hospitals and other charitable institutions.

Property of noncharitable hospitals is, generally speaking, subject to taxation to the same extent and in the same manner as the property of any corporation or business organized for profit. This is true even though the hospital does a considerable amount of charity work. On the other hand, all real and personal property of hospitals organized for eleemosynary purposes, when used for the designated charitable purposes, is, under these constitutional and statutory provisions, exempt from taxation. This is equally true of securities, a form of personal property the income of which is exclusively used in charitable work. Real property proper, however, which is leased or used for making profit, is subject to taxation even though the income or revenue is devoted to the maintenance and support of the hospital. As one court says of such property, "It is only when the property itself is actually and directly used for charitable purposes that the law exempts it from taxation." The burden of establishing the conditions under which the hospital is entitled to exemption from taxation rests upon the hospital claiming it.

In earlier years, administrative officials, courts, and legislatures were generous in their interpretation of these provisions for tax exemptions in favor of charitable organizations. There are many charitable corporations, incorporated under special acts in early years, which possess highly prized tax-exempt charters, relieving them of the necessity of paying any general taxes. More recently, however, as public expenditures have mounted and as the difficulties of raising public revenue have increased, states, under pressure of public opinion, have been compelled to adopt a stricter attitude. During the past two or three years, many complaints have been made that too much property is escaping taxation on this score. Some have suggested that the state should entirely reverse its policy of granting tax exemptions to any institution for any purpose.

Another problem which confronts hospital administration is adjusting its managerial policies to the police power of the state. Police power is the power of a government to pass

reasonable regulations to promote the health, safety, and morals of the people. Under this power a state or a subdivision thereof may pass a law regulating the location of hospitals, their construction, sanitation, and ventilation. They may regulate the dispensing of narcotics and require the use of certain preventives under designated conditions. These and numerous other types of general police regulations the state legislature or city council may pass, provided they are reasonably necessary in the promotion of the health, safety, or morals of the people.

In most states all hospitals, public and private, charitable and noncharitable, are placed under the general supervision of some administrative official or board. This too is a police regulation, designed to see that a hospital is being managed by competent and honest officials and that in its management it is complying with the standards of health and safety set by the state. In many states, the board of health is given the power to license hospitals and to revoke these licenses for cause. When licensure is a control device, it is required of charitable as well as of noncharitable institutions. When, however, licensure is merely a revenue device, charitable institutions are exempted from it. In other states the visitorial powers of the state are exercised by a board of charities or similar organization.

A problem of grave concern to hospital administration is the extent to which hospitals are answerable for torts and breaches of contract. The liability of hospitals arises either out of contract or out of tort. A contract is an agreement which the hospital voluntarily enters into, based upon consideration and for some lawful object. The liability in this respect is the same as that of any normal person or any corporation. The hospital, in other words, for a breach of contract, whether it be with a patient, a physician, an employee, or a tradesman, is answerable for damages to the same extent and in the same manner as any normal person, whether natural or juristic.

The liability of a hospital in tort presents a much more perplexing problem, not only because courts have to some extent departed from the usual principles of tort liability in these cases, but also because the very nature of the work of the physician and the hospital develops many situations of this kind. A tort is a legal wrong, causing damage to one's person, property, reputation, or social and economic relations, for which the appropriate remedy is an action for damages. Liability in contract is voluntarily assumed; tort liability is imposed on a person for reasons of public policy, irrespective of his consent. There are many different torts, such as assault, battery, deceit, libel, slander, and trespass, but the tort which creates most embarrassment for the hospital administration is one which is ordinarily called negligence.

The term negligence has been differently defined by different writers. One writer says that "for present purposes we may define negligence as an improper regard of one for the safety of the person or property of another." Another says that "negligence, therefore, essentially consists in the mental attitude of undue indifference to one's conduct and its consequences." It is frequently said that negligence is a failure to exercise the care of an ordinary person. Again it is said that negligence consists in a breach of legal duty to exercise a proper degree of care for the rights of others. To state the same idea in other words,

if one person directly or indirectly causes an injury to another, he is answerable in damages to the latter, if in causing the injury he did not exercise that degree of care which a reasonably prudent person would have exercised under the same circumstances.

From what has been said, it is obvious that rules of mathematical precision cannot be formulated for determining whether in a given situation a person has been negligent as to an injurious result which he has caused. In each case, it is a question of fact for the jury. The jury, in making up a verdict, must first know what actually happened, and then must say whether such conduct was reasonably prudent under the circumstances. In doing this, the jury, as a cross-section of the community from which it comes, more or less vaguely and unconsciously measures the conduct of the alleged wrongdoer by its own standards of care and prudence. In this way, verdicts of juries in negligence cases roughly approximate prevailing standards of care in the community.

In one case, the court said that it is the duty of a sanatorium to safeguard its inmates against dangers which mentally defective persons could not be expected to guard against. But, said the court, "it was for the jury to say what would constitute ordinary care on the part of the defendant in taking precautions to prevent deceased from escaping during an irrational period." In another case, the hospital was held responsible for the death of the plaintiff's intestate from smallpox contracted in the defendant's hospital, on the ground that a nurse, knowing another patient in the hospital had smallpox, did not exercise the care of a reasonably prudent nurse in protecting the plaintiff's intestate against the contagion. In another case, a hospital was held not responsible for the death of the intestate caused by jumping out of an open window, since it had no basis for suspecting any suicidal mania on the part of the deceased when he was admitted.

Although there is some authority for saying that there are different degrees of care, such as slight, ordinary, and extraordinary, courts and writers generally agree that there is only one degree of care, and that is the care which a reasonably prudent person would have exercised under the same circumstances. This principle is illustrated by cases involving the services of physicians and surgeons. A physician who is called to treat an ailment is answerable for the injurious consequences of his treatment, unless he exercises the degree of care which a reasonably prudent skilled person would have exercised under the same circumstances. An unskilled person who is called to minister to someone is not liable if he does as well as a reasonably prudent unskilled person would have done under the same circumstances. If, however, an unskilled person professes to have skill which he does not have, he is answerable for damages which he causes, even though he does as well as any unskilled person would have done; his wrong in this event consists in having professed to have skill which he did not have.

Negligent misconduct may consist of doing something which one should not do at all; it may consist in doing badly something which one is supposed to do; or it may consist in doing nothing at all when there is a duty to do something. A private hospital, for instance, is under no legal obligation to receive every sick or injured person who applies for medical care, but if it actually assumes control over a person or situation requiring expert attention,

it is legally obliged to carry out its undertaking, and to carry it out with a degree of care which a reasonably prudent hospital would have exercised under the same or similar circumstances.

Another important principle in this connection must be mentioned. I am not only responsible for the torts which I commit, but I am also answerable for all torts committed by my servants, agents, and representatives within the course of their employment. In this event the injured person may sue me, my representative, or the two of us jointly, although, of course, he is entitled to only one satisfaction for the single wrong. As corporations, including hospitals, can act only through servants and agents, the injured person has, generally speaking, a choice of remedies. The representative or agent, however, is solely answerable for torts committed by him outside the scope of his employment.

The doctrine in question, ordinarily called the doctrine of *respondeat superior*, does not apply to representatives acting as independent contractors. An independent contractor is one who is employed to accomplish a given result but who in the accomplishment of the result acts independently and is not under the direction or control of his employer. This has been held to apply to a situation in which a doctor who is not a member of the staff of a hospital brings a patient there and improperly cares for him. In this event, the doctor alone is answerable for the wrong.

On the question as to how far a hospital is answerable to patients for the consequences of the negligent conduct of its physicians, interns, nurses, and employees generally, there is some difference of opinion. I shall briefly summarize the situation.

In the first place, it should be pointed out again that the patient in any event has his remedy for damages against the doctor, intern, nurse, or other employee through whose negligence he sustained an injury.

In the second place, the liability of a noncharitable hospital for negligent injuries to patients is substantially the same as that of a manufacturing or selling corporation. The hospital is answerable in these cases even though the patient was admitted on a charity basis. Some courts are inclined to say that in such cases the hospital is under duty to exercise only a slight degree of care. Most cases, however, take the view that the hospital must exercise in such cases the degree of care which a reasonably prudent hospital would exercise under the same circumstances, but that a circumstance to be considered is that the injured person was a charity patient.

In the third place, there are at least three different views as to the liability of a charitable hospital for injuries sustained by patients through the negligence of physicians, interns, nurses, and others.

a) In a few jurisdictions, courts, in determining liability for negligence, treat charitable and noncharitable hospitals alike. These courts find nothing in the situation to justify any lessening of the liability of a charitable hospital. Courts taking this view, while admitting that as a matter of policy hospital administrators must not divert endowed funds from proper purposes, feel that the requirement that a person or corporation should answer for the wrongs of servants and

agents committed in the course of their employment is an even more important piece of public policy. Under this view a charitable hospital is fully liable for injuries sustained by patients through the negligence of doctors, interns, nurses, and other employees.

b) On the other extreme, in Massachusetts and in some other states, courts completely exempt hospitals from liability for the negligence of its servants and agents. "A public charitable hospital," says one court, "is not liable for the negligence of its managers in selecting incompetent subordinate agents selected with care." Courts in reaching this conclusion proceed upon the theory that trust funds, dedicated to charitable purposes, must not be diverted to payment of damages caused by negligence even of its servants and agents. In a Missouri case, the court says: "If we uphold the rule which would make an institution of charity liable to a patient who has been injured by an incompetent nurse, negligently selected, we destroy the principle we have endeavored to make clear, that charitable trust funds cannot be divested from the purposes of the donor." The reply to this is found in a Minnesota case: "We do not believe that a policy of irresponsibility best serves the beneficent purpose for which the hospital is maintained. We do not approve the public policy which would require the widow and children of deceased rather than the corporation (the hospital) to suffer the loss incurred through the fault of the corporation's employees, or in other words, which would compel the persons damaged to contribute the amount of their loss to the purposes of the most worthy corporation. We are of the opinion that public policy does not favor exemption from liability."

c) Apparently a majority of courts take a view somewhat between these two extreme views. These courts hold that a charitable hospital is not answerable to patients for injuries arising out of the negligence of its servants and agents in the course of their employment, unless it is shown that the hospital management failed to exercise reasonable care in the employment of competent servants and agents. Of the courts taking this view, some rely on the ground that trust funds ought not to be diverted to the payment of damages except in the cases in which it appears that the hospital was negligent in the selection of competent representatives. Others say that a patient applying for the services of a charitable hospital impliedly agrees to limit the normal liability of the institution in the manner indicated. Fundamentally this limitation of the liability of charitable institutions is based upon public policy. It is substantially the same policy which legislatures followed in exempting charitable institutions from the payment of taxes. Under this view, the injured plaintiff, in establishing the right to recover from a hospital has the burden not only of proving that his injury arose from the negligence of some servant or agent of the hospital, but also of proving that the hospital management did not, in the selection of its staff and employees, exercise that degree of care and caution that a reasonably prudent hospital management would have exercised under the same circumstances. Whether in a given case the management has exercised the requisite care is a question of fact for the jury.

The liability of a municipal or public hospital is on a somewhat different basis from that of a private charitable hospital. A municipal hospital from this point of view is treated as a municipal corporation. A municipal corporation, such as a city, has a two-fold character. On the one hand, in so far as it owns property and engages in private transactions it

is a proprietary corporation and is answerable as any proprietary hospital for acts and conduct of its servants and agents within the scope of their employment. On the other hand, a municipal corporation is a subdivision of the state in the performance of certain public functions, such as safeguarding the health of its residents. In the performance of these functions, a municipal hospital is not answerable for the negligence of its servants and agents. In one case, the court says:

The handling of persons sick with contagious diseases is a duty which the city performs through its officers and agents in the exercise of governmental functions. The benefits of such service go to the public, and not to the municipality of a corporate body. Hence the manner in which the officers of the city perform said service cannot ordinarily render the municipality liable in damages.

The courts of common law say that the proper representative, the surviving husband, wife, or next of kin, had a quasi-property interest in the body of a deceased person. They accordingly hold that a hospital is answerable in damages for the performance of unauthorized autopsies. One court says:

This right is one which the law recognizes and will protect and for any infraction of it, such as the unlawful mutilation of the remains, an action for damages will lie. In such cases, the feelings and mental suffering resulting directly and proximately from the wrongful act may provide ground of action, although no pecuniary damage is alleged or proved.

In most states, the performance of autopsies is regulated by statute, and unauthorized autopsies are usually made misdemeanors, punishable by fine, imprisonment, or both.

In conclusion, let it be said that these are only illustrative of the legal problems which hospital administration encounters, and, further, that law is only one of various types of social control of which hospital administrators should have an awareness.

2. Hospital Liability for Negligence, by *Emanuel Hayt**

A HOSPITAL opens its doors without discrimination to all who seek its aid. It gathers skilled physicians and trained nurses, and places their services at the call of the afflicted, without scrutiny of the character or the worth of those who appeal to it; looking at nothing and caring for nothing beyond the fact of their affliction.¹

In this beneficent work, the voluntary or charitable hospital does not subject itself to liability for damages for the wrongful acts or negligence of its physicians and nurses, *if the institution has used reasonable care in the selection of these persons*. It has been said that this relation is not one of master and servant, but that the physician occupies the position, so to speak, of an independent contractor, following a separate calling. As such, he is liable, of course, for his own wrongs to the patient whom he undertakes to serve; he involves the

* Adapted from *Hospitals* 11:90-95, Dec. 1937.

¹ *Schloendorff v. New York Hospital*, 211 N. Y. 125.

hospital in no liability. On this theory of independent contractor, a hospital is held immune from liability to patients for the malpractice of its physicians.

It is true of nurses, as of physicians, that in treating a patient they are not acting as servants of the hospital. Nurses are employed to carry out the orders of the physicians to whose authority they are subject. The hospital merely undertakes to procure for the patient the services of a nurse; it does not undertake through the agency of nurses to render those services itself.² In that respect, no distinction is made between the position of a nurse and that of a physician.³ So also, where the nurse has been retained by the patient to render exclusive service and her compensation is paid directly by the patient, the hospital cannot be held responsible for the negligent treatment of the patient.⁴

This rule of relationship between hospital and nurse is not limited in its application to charitable corporations alone. It has been held that a railroad company, in employing a nurse to care for an employee, is in no different position from a hospital, because the nurse follows her own calling rather than that of one in the service of the employer; she is left to act on her own responsibility under the general direction of the physician in charge of the case.⁵ The employer has performed his full duty to his employee when he has exercised due care in the selection of reasonably competent physicians, nurses, and other professional employees.

In all cases where it is sought to make a charitable corporation liable in damages for the carelessness of its physicians, nurses, or orderlies, the sole ground of responsibility must be predicated upon the fact that there was failure to exercise due care in the selection of the agent. For example, a hospital is not liable for the negligence of a nurse in leaving a hot-water bottle in a bed, by which a patient is burned, there having been no failure to use reasonable care in employing the nurse.⁶ The corporation likewise is not chargeable with the negligence of its surgeon in operating on a patient without consent where such institution exercises due care in employing a surgeon who is deemed competent.⁷ Of course, a surgeon who performs an operation without his patient's consent commits an assault, for which he is liable in damages, except in cases of emergency where the patient is unconscious and where it is necessary to operate before consent can be obtained. As for the charitable institution whose visiting and resident physicians serve without pay, it is not liable for the operation performed without the patient's consent, although it furnished to the operating surgeons the facilities of its surgical ward, but had no knowledge that the operation was to be performed in disregard of the patient's instructions.⁸

Hospital nurses while assisting a surgeon in such an operation are not the servants of the hospital; the acts of preparation immediately preceding the operation are necessary to

² *Schloendorff v. New York Hospital*, *supra*.

³ *Ward v. St. Vincent's Hospital*, 78 App. Div. 317; *Cunningham v. Sheltering Arms*, 135 App. Div. 178.

⁴ *Kampos v. Crown Heights Hospital*, *New York Law Journal*, June 19, 1937, p. 3111, App. Div. 2nd Dept.

⁵ *Renouf v. N. Y. Central R. R. Co.*, 254 N. Y. 349.

⁶ *Joel v. Woman's Hospital*, 89 Hun. (N. Y.) 73, 35 N. Y. S. 37.

⁷ *Collins v. N. Y. Post Graduate Medical School*, 69 N. Y. S. 106.

⁸ *Schloendorff v. New York Hospital*, *supra*.

its successful performance, and are really a part of the operation itself. Such acts are not different in that respect from the administration of the ether. Whatever the nurse does in those preliminary stages is done, not as the servant of the hospital, but in the course of the treatment of the patient. She therefore acts as the delegate of the surgeon to whose orders she is subject. The hospital is not chargeable with her knowledge that the operation is improper any more than it can be chargeable for the surgeon's knowledge thereof.⁹

There has always been much confusion and conflict on the question of exempting charitable corporations from liability for the acts of their agents and servants. Where absolute immunity is granted, it is sometimes rested on the "trust funds" theory: that the funds of the corporation are the subject of a charitable trust; to suffer a judgment to be recovered against the institution would be an illegal diversion and waste of the estate. This theory was first enunciated probably in 1846,¹⁰ when it was said that to give damages out of a trust fund would not be to apply it to those objects which the author of the fund had in view, but would be to divert it to a completely different purpose.

What is thought by some courts to be a sounder doctrine than that of "trust funds" is that of the "waiver" theory, which stands on the principle that one accepting the bounty of the institution impliedly waives any claim of liability against it for the negligence of its agents and servants, provided that there has been due care used in the selection of servants.

New York state, however, has rejected both of these theories, and has based its conclusion on the so-called independent-contractor theory: that the doctrine of *respondeat superior* does not apply, i.e., the master is not responsible for the servant's wrongful conduct.¹¹ In other words, the New York doctrine of immunity is fixed upon the theory that those employed by a hospital or other charity act not as servants of the charity but as servants of the patient.¹²

This rule was applied where an orderly placed a hot-water bottle against the body of a patient, causing her to be severely burned. It was held that the status of an orderly is determined by the nature of the work he is employed to do rather than by the pay-roll designation of his position. Broadly speaking, he is a hospital attendant who does general work, while a nurse is one who cares for the sick. The orderly at times also does nursing. Here the orderly was engaged in a specific act of *caring* for the sick patient. He was not engaged in general work at the time, such as running errands, lifting beds, or the like. The orderly, so far as he was engaged in nursing, under the authority of the hospital, was supposed like other nurses to act on his own responsibility. If his act was unauthorized by the hospital, the rule of *respondeat superior* does not apply. The hospital is not liable to the patient for the unauthorized acts or negligent nursing care of an orderly.¹³

The rule of the complete exemption of charitable institutions, as has been indicated, has its limitations. Exemption is denied, for instance, where the patient can prove that the hos-

⁹ *Schloendorff v. New York Hospital*, *supra*.

¹⁰ *Herriot's Hospital v. Ross*, 12 Clark & F, 507, 8 Eng. Reprints, 1508, 1510.

¹¹ *Horden v. Salvation Army*, 199 N. Y. 233.

¹² *Phillips v. Buffalo General Hospital*, 239 N. Y. 188.

¹³ *Phillips v. Buffalo General Hospital*, *supra*.

pital failed to exercise due and reasonable care in the selection of physicians, nurses, or attendants, and that the injuries complained of resulted from the incompetence or negligence of such persons.

The fact that a public charitable hospital receives pay from a patient does not affect its character as a charitable institution in relation to such patient.¹⁴ Such a payment is regarded as a contribution to the income of the hospital, to be devoted like its other funds to the maintenance of the charity. It is not necessary that an institution shall be wholly charitable to fall within the definition of being a charitable institution; it is enough that it is partly charitable in character and purpose.¹⁵ So a hospital which was incorporated "for the purpose of treating indigent persons suffering from diseases of the eye and ear" was held to be a charitable corporation, although it appeared that patients, when able to do so, were required to pay for their treatment.¹⁶

In the matter of tax exemption, the requirement or acceptance of charges from patients able to pay does not change the charitable status of the institution. Hence, a hospital which treats its needy patients for nothing but charges the well-to-do an amount insufficient to cover the per capita cost of maintenance, does not change its standing as a charitable institution.¹⁷ Payment by the patient of the regular rates charged by the hospital for paying patients does not take the case out of this class. Such income is added to the hospital foundation or endowments to make it possible for the work to go on.¹⁸

As far as the hospital's exemption from the negligence of its servants is concerned, paying and nonpaying patients are in the same category. Both classes are also on the same level of rights. A charity patient has precisely the same right of action for malpractice as one who pays for attendance, since all patients are entitled to the same degree of care.¹⁹

Physicians, nurses, residents, pathologists, roentgenologists, as well as private physicians and special duty nurses, are classed as non-administrative employees. It is firmly established, in New York, that the hospital is not liable for their negligence. Administrative employees, on the other hand, are the superintendent, assistant superintendents, cashier, telephone operator, and those not concerned with the actual care of the patient, but who are interested in the administrative activities of the institution. Until recently New York was undecided on the responsibility of administrative agents. Other jurisdictions, however, appear to have disregarded the existence of a distinction between administrative and non-administrative employees and have granted immunity to both. These jurisdictions rely upon either the trust funds doctrine or the waiver theory.

This distinction between agents is not novel in New York state. In the case of *Hamburger v. Cornell University*,²⁰ a medical student at the school was injured by an explosion of chemicals in the laboratory. He claimed that certain chemicals had been improperly

¹⁴ *Schloendorff v. New York Hospital*, *supra*.

¹⁵ *People ex rel. New York Institution for Blind v. Fitch*, 154 N. Y. 14; *Corbett v. St. Vincent's Industrial School*, 70 App. Div. 334; *aff'd* 177 N. Y. 16.

¹⁶ *Van Tassell v. Manhattan Eye and Ear Hospital*, 15 N. Y. Supp. 620.

¹⁷ *People v. Purdy*, 58 Hun. 386, 12 N. Y. S. 307; *aff'd* 126 N. Y. 679.

¹⁸ *Schloendorff v. New York Hospital*, *supra*.

¹⁹ *Harris v. Woman's Hospital*, 27 Abb. N. Cases (N. Y.) 37.

²⁰ 240 N. Y. 328.

labeled, thereby being caused to explode after they were mixed by him. The student lost an eye. It was charged that the negligence was that of some laboratory employees in failing to label the bottles properly. The court, although distinguishing between both classes of employees, found there was no liability on the part of the hospital for either administrative or non-administrative negligence in this case.

In another case, a hospital was held not to be liable for the negligence of an administrative officer charged with the duty of making physical repairs to the building and keeping it free from defects,²¹ where a patient was injured by having the flushing tank connected with the toilet fall upon her. She was undressing at the time the accident occurred. The patient was registered at a maternity hospital by her physician and was to avail herself of the facilities of the institution at a nominal charge of \$65.00 for ten days' lying-in during the birth of the child. She paid nothing for various examinations conducted there by her physician prior to delivery. The hospital concededly was a charitable institution.

This decision was based on the late case of *Stearns v. Association of the Bar of the City of New York*. In the *Stearns* case, the plaintiff went to the Bar Association of the City of New York to complain about the alleged misconduct of a member of the Bar. While on the premises of the Bar Association she was injured by falling over a doorsill. She claimed it was defective as a result of the negligence of the defendant's building superintendent. The defendant interposed the plea that it was a charitable institution and hence not liable to beneficiaries for the torts of agents who were selected with due care. Plaintiff urged that the defendant's immunity for the torts of its non-administrative agents did not extend to acts of its administrative agents. However, the court held that the defendant's immunity here embraced both classes of agents.²² From the *Stearns* case, by analogy, it follows that a hospital's immunity as a charitable corporation covers the acts of both administrative and non-administrative agents.

In addition to administrative and non-administrative agents, the courts in recent decisions have designated a third class of hospital agents, i.e., those who function as mere servants or employees of the hospital. This third type of employee was suggested in a late case, in which a patient, who was being carried down a flight of stairs in her home, fell from the stretcher and was injured. She sued the hospital to recover damages for personal injuries arising out of the alleged carelessness of the stretcher-bearers. Her complaint was dismissed by the trial judge, but she appealed to the Appellate Division which ordered a new trial to determine the relationship between the stretcher-bearers and the hospital and in what capacity they were employed or serving the hospital.²³ The court there defined the third class of agents as neither administrative nor non-administrative but "true servants."

The liability of the hospital for the negligence of a mere employee or true servant was presented in another case. Without deciding the particular question, the court was of the

²¹ *Witty v. Jewish Maternity Hospital*, N. Y. Law Journal, 1935, City Court, N. Y. County, Keller, J.

²² 154 Misc. 71, 75.

²³ *McCormack v. Jewish Hospital of Brooklyn*, 283 N. Y. S. 737, App. Div. 2nd Dept.

opinion that hospitals should be held liable for the negligence of their true servants. A patient was injured by falling into a chute over which the janitor failed to place the chute cover. For instance, said the court, if the chute or chute covers were used in connection with an operation to be performed or treatment to be given and were in the operative care of a doctor or nurse, the case would fall within the rule of the *Cornell University* case, and the defense that hospitals are not liable for administrative or non-administrative negligence would be good. On the other hand, if the chute or chute cover were used to remove garbage from the hospital, and were in the operative care of the janitor, a different conclusion might be reached.²⁴

The question of whether a charitable institution is liable to patients for the negligence of true servants of the hospital has been squarely answered by the latest decision of the Court of Appeals.²⁵ The court held that "no conception of justice demands that an exception to the rule of *respondeat superior* be made in favor of the resources of a charity and against the person of a beneficiary injured by the tort of a mere servant or employee functioning in that character." A charitable hospital was therefore held liable for the negligence of its ambulance driver in colliding with another vehicle and thus injuring a patient who was being conveyed to her home. In another part of the opinion the court said: "We think it would not be a harmonious policy that would require this plaintiff to put up with her injuries on the score that the appellant (hospital) is a charitable corporation."

The decision of the *Sheehan* case has been followed in an action in one of the lower trial courts. In the course of her duties a member of the Ladies Auxiliary of a hospital, who was performing a gratuitous service for the benefit of the institution, slipped on some butter which had been allowed to drop and remain on the floor. The complaint alleged that the negligence was that of the hospital's "servants and agents." As a defense the hospital claimed that she was a beneficiary of the charitable corporation because, in working without compensation for the hospital, she received mental and spiritual rewards. Somehow the learned judge, being better versed in law than in philanthropy, failed to see the spiritual benefits obtained in working gratis for a charitable hospital; he refused to dismiss the complaint, on the ground that the alleged injury was such that it must have been caused by the negligence of a "mere servant or employee functioning in that character."²⁶

It may now be accepted as definitely settled in New York that a charitable hospital is liable for the negligent acts of a "mere servant or employee functioning in that character," as distinguished from administrative and non-administrative agents.

For a tort, which is a legal wrong causing personal injuries or a loss of money or property, the proper remedy is an action for damages. The law regulates the responsibility of hospitals for their wrongful acts, but contract liability is voluntarily undertaken.

Of all the types of tort or legal wrongs, that designated ordinarily as negligence causes the greatest amount of difficulty for hospitals. Negligence is more commonly defined as

²⁴ *Honigman v. Lebanon Hospital*, City Court, Bronx County, Evans, J., N. Y. Law Journal, Nov. 30, 1935.

²⁵ *Sheehan v. North County Community Hospital*, 273 N. Y. 163, affirming 289 N. Y. S. 756.

²⁶ *Bergman v. Sydenham Hospital*, N. Y. Law Journal, Apr. 28, 1937, p. 2113, Shientag, J.

an improper regard for the safety of another's person or property. Another definition is the failure to use the care of an ordinarily prudent person. Sometimes negligence is said to be the breach of a legal duty to use due care for the rights of other persons. Negligence may also be a breach of contract if there is a contract calling for specific care.²⁷ For example, a hospital agreed to take care of a four-month-old child in the institution while the mother was undergoing treatment. The child accidentally was burned by a steam pipe. The institution was held liable for damages because it had made an express contract to receive the child under its care and to safeguard it. In this instance the child was not a patient and therefore not a beneficiary of the charity.

Ordinarily a hospital, whether it is benevolent or not, must perform whatever it expressly agrees to do, or become liable for damages. When an institution specifically promises to provide certain services, it is under a duty to carry out the terms of the agreement. A hospital was sued by a patient on the ground that its superintendent had agreed to provide surgical services, which were to be included in the charge of \$20 weekly for room and board. The complaint was dismissed because the evidence clearly showed the superintendent had no authority to make any contract on behalf of the hospital for the services of physicians or surgeons in its employ.²⁸

An attempt was made recently to hold a hospital responsible for a patient's death on the basis of a breach of contract where the alleged breach was really due to negligence. A patient with suicidal tendencies was admitted to a charitable hospital. During an unguarded moment, he threw himself out from a window of the private room occupied by him on the third floor of the hospital, and died. Suit was brought against the institution for damages arising out of the patient's death. In the complaint it was charged that the hospital had been informed the patient was manifesting an intention to commit suicide; that an agreement was made whereby the hospital, in consideration of \$30 per week, agreed to receive the patient under the care of the institution and to exercise a constant watch and scrutiny over him and protect and safeguard him until his discharge.

Damages were sought for a breach of the agreement, and the consequent death of the patient. In defense the hospital denied the making of such a contract, but admitted receiving the patient into the hospital. It likewise denied having been informed that the patient manifested suicidal tendencies. As a further defense, the hospital alleged that it operated and maintained a hospital as a charitable institution, from which no financial benefit accrued to its directors or organizers; that it was not maintained or operated for profit and was maintained in part by voluntary contributions. In upholding the defenses of the hospital, the court said that, although the complaint alleged a breach of contract on the hospital's part in failing to maintain a constant surveillance and scrutiny over the person of the patient, the action was actually one of negligence. If the facts at the trial established that it was negligence that resulted in the death of the patient, the hospital's defense that it was immune as a charitable corporation from such an action would be good. Even if the exist-

²⁷ *Roche v. St. John's Riverside Hospital*, 96 Misc. 292, aff'd 176 App. Div. 885.

²⁸ *Wilson v. Brooklyn Homeopathic Hospital*, 97 App. Div. 32, 89 N. Y. S. 619.

ence of the contract to keep the patient under a constant and watchful surveillance and scrutiny over him were proved, it was not within the reasonable contemplation of this contract that the hospital bound itself to pay the value of the patient's life in case he did commit suicide.²⁹

The reasons that have led to the adoption of the rule that hospitals may not be sued ordinarily for the torts of their doctors and nurses to patients do not apply where the wrong is committed by a servant of the hospital and the sufferer is a stranger.³⁰ This rule is illustrated in the case of a mechanic who was injured while engaged in making repairs on a boiler in a hospital. The accident was caused by the alleged carelessness of the employees of the corporation. The court overruled the contention of the hospital that as a charitable organization it was not liable under the doctrine of *respondeat superior*. It was held responsible for the negligence of its employees.³¹

In another case, a steam-fitter's helper, while performing certain work in a building occupied by a charitable institution, was injured by a boiler explosion, which he claimed was the fault of an employee of the defendant. He also was allowed to recover damages for the carelessness of the defendant's servants, on the ground that he was not a beneficiary of the charity at the time of the accident.³²

Both a charitable hospital and its ambulance driver were held liable for negligently running down and injuring a pedestrian while the ambulance was answering a police call.³³ Apparently, no distinction is now made by the courts for the negligence of ambulance chauffeurs, whether the person aggrieved is a patient or a stranger.³⁴

A great many accidents to patients and visitors occur within the hospital itself. About 50 per cent of such accidents are caused by persons slipping on slippery floors or substances. Serious fractures are not uncommon as a result of such falls.

In these slippery-floor cases, hospitals have been held answerable in damages to patients as well as strangers. At one hospital on Staten Island, a visitor who had come to see a patient was injured on her way out of the hospital, by slipping and falling due to soapy water. The porter testified at the trial that he had mopped the floor with a solution of water and soap powder; that the linoleum covering was 8 to 10 years old and torn in parts. An expert in linoleum who was called to give his opinion said that the condition of the linoleum, under these circumstances, was a competent producing cause for the slimy condition at the time of the accident. Damages were therefore awarded to the injured person by the court.³⁵

It is a common practice in hospitals both to wash and wax or polish floors. Nonslip floor preparations are now replacing most of these substances. Any floor may be slippery when

²⁹ *Daniele, as admr. v. Missionary Sisters of Sacred Heart Conducting Columbus Hospital Extension*, Sup. Court, Bronx Co., Spec. Term, Part I, Koch, J., N. Y. Law Journal, p. 436, Aug. 19, 1937.

³⁰ *Schloendorff v. New York Hospital*, supra.

³¹ *Kellogg v. Church Charity Foundation*, 203 N. Y. 191.

³² *Horden v. Salvation Army*, 199 N. Y. 233.

³³ *Van Ingen v. Jewish Hospital of Brooklyn*, 169 N. Y. S. 412.

³⁴ *Sheehan v. North County Community Hospital*, supra.

³⁵ *Johnsen v. Staten Island Hospital, Inc.*, 271 N. Y. 519.

wet, but the hospital is not liable for accidents which are caused while the process of cleaning the floor is going on. No better method has been devised by man for cleaning floors than the use of water and some soapy preparation.⁸⁶ However, if the floor is left in a wet and soapy condition by the porter and an accident occurs through slipping, the hospital may be held liable.⁸⁷

Other accidents to visitors are due to tripping over obstacles such as mops, buckets, and other apparatus which are left on the floor where persons are apt to walk. Strangers are sometimes caught in elevator doors or in revolving doors. Falls also occur as a result of snow or ice at the approaches or entrances to the hospital. In most of these cases, it may be a question of both law and fact as to whether the particular condition responsible for the accident constituted legal negligence. There can be no general rule for all cases.

Another class of persons who sometimes sustain personal injuries are employees of the hospital. By occupation, the greatest frequency is among student nurses. The most expensive of these injuries from a compensation viewpoint are those sustained in lifting patients and those due to burns in using the sterilizer. Employees may not sue for damages, but they are entitled to workmen's compensation without regard to fault. The right to sue the employer for negligence was abolished in 1928 when the Workmen's Compensation Law brought these occupations within the law and made compensation insurance compulsory.⁸⁸ Those engaged in teaching and non-manual capacities in the hospital are not covered by the law, but the statute gives the hospital the option of bringing these employees within the coverage of compensation by specifically securing compensation insurance for them. The workers are then bound by the compensation act unless they notify the employer and the industrial commissioner that they elect to come outside the scope of the statute.⁸⁹

Special duty nurses are not hospital employees, strictly speaking, because they are paid directly by the patient, although usually through the office of the hospital. These nurses should not be carried on the hospital pay roll. They need not in that event be included in compensation coverage and may sue the hospital like any other visitor at the institution.

An example of a case where one not strictly an employee came within the purview of the compensation act was that of an intern or junior house physician. The claimant had performed a necropsy at the direction of the superintendent and was sewing up the corpse when the needle slipped and punctured his finger. Blood poisoning followed. It was held that although the business was not conducted for gain and was consequently not within the law, the law would be applied to the same extent as if gain rather than benevolence inspired its activities, because the hospital and its employees had elected to come under the provisions of the law. A distinction was drawn in the case, however, between the position of a visiting or consulting physician and that of an intern who has placed his time and service at the call of a superior. The intern is under a duty to spend his days and nights at

⁸⁶ *Samuels v. Terry*, 227 App. Div. 68, aff'd 253 N. Y. 593.

⁸⁷ *Shearod v. 41 St. & Park Ave. Corp.*, 254 N. Y. 618.

⁸⁸ Workmen's Compensation Law, sec. 3, sub. 1, group 18.

⁸⁹ Workmen's Compensation Law, sec. 3, sub. 1, group 19.

the hospital, and to render any service, administrative or medical, exacted by the hospital through its administrative agents, within the range prescribed by propriety and custom. He is a servant or employee by every test of permanence of duty, of intimacy of contact, and of fullness of subjection.⁴⁰

Occupational diseases play their part in causing disability among hospital employees. These are now all included within the scope of the Workmen's Compensation Law.⁴¹

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⁴⁰ *Matter of Bernstein v. Beth Israel Hospital*, 236 N. Y. 268.

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CHAPTER XX. HOSPITAL CONSTRUCTION

1. Hospital Planning; a Study of Its Economic Problems, by S. S. Goldwater, M.D.*

THE cost of hospitals is an important item in the social budget. Trade reports show that in the United States alone money is being poured into hospital construction at the rate of approximately a million dollars a day. There is need of a theory of the economics of hospital planning to safeguard these large sums. The great gap between the lowest and highest rates of expenditure for hospital construction warrants the assumption that basic principles are not commonly understood or that they are not uniformly applied.

The first requisite of a theory of the economics of hospital planning is a unit of value. Such a measure is not easily defined. The totality of the service that hospitals render to the sick is the real measure of their value, but such services are of too many kinds to be expressed in a single mathematical term. The service of the hospital is not confined to the occupants of hospital beds. It is widespread, and extends to all those, in or out of the hospital, whose health and welfare are affected by the hospital's teaching and practice. To trace the far-reaching effects of hospital activities is to perceive that hospital planning has many implications, that it is a complicated art, that it involves grave social responsibilities, and that the proper evaluation of the usefulness of a hospital building cannot be made without much study.

If hospital costs vary, so also do hospital values. Whereas a hospital planned and equipped merely for the shelter of the sick, for the administration of simple remedies, for the performance of slight laboratory tests and of routine surgical procedures may be built at a relatively small cost, one that is generously equipped for research and for teaching requires a much greater outlay. While almost the entire usefulness of the simpler type of hospital is reflected in its statistical report—so many patients, so many days of hospital service rendered, so many complete or partial recoveries, so many patients “unrelieved” (hospitals do not use the word “failure”)—a similar statistical report dealing with the activities of the research or teaching hospital tells only half its story, for besides the results just enumerated, the research and teaching hospital contributes values that cannot be statistically summarized. I refer to such valuable contributions as new knowledge of the causes of disease and of effective methods of treatment, together with the education of undergraduate and graduate students of medicine. If the hospital that is designed for research and teaching performs its functions successfully, can one, notwithstanding its high cost, assert that it is the more expensive of the two types, that it costs more in proportion to the service it renders?

The actual cost of a hospital building is of great practical importance to the building

* Adapted from *Mod. Hosp.* 33:57-64, Aug. 1929. This is the first of two articles of this title by Dr. Goldwater; the second appeared in the September issue.—Editors.

committee. But in a theoretical approach to hospital planning, the mere cost of construction cannot be accepted as the ruling factor. The size or mass of a correctly planned hospital building and the character of its equipment, which basically determine cost, are not deduced from the treasurer's report of available funds but from functional needs. A logically conceived hospital plan is not one in which a given space or mass is arbitrarily assumed and then subdivided to the best of the architect's ability, but one in which the requirements of the various hospital functions are first studied separately, the forms and space allowances thus ideally conceived for individual departments being afterward put together in the least disadvantageous combination possible.

In approaching the subject of hospital planning, certain questions must be put and answered. What are the proper proportions of the parts that go to make up the hospital as a whole? How can these parts be so united—to borrow an analogy from human anatomy and physiology—as to produce as much gland or productive tissue and as little unproductive connective tissue as possible? It is in combining hospital departments into a well-proportioned, smoothly functioning, and not unduly expensive whole that the hospital planner achieves success or registers failure. He holds in his hands the scales of justice; his mission is one of equity, to the fulfilment of which a penetrating and impartial mind is indispensable.

It is not the purpose of this paper to discuss minutely the multitude of details that enter into hospital planning, although each of these, in a minor degree, influences the cost of both building and maintenance, but rather to consider certain phases of planning that derive their special characters from administrative principles and practice and that influence the cost of construction and affect the hospital's efficiency.

The cost of hospital building depends chiefly on its mass and arrangement, on the quantity and character of its fixed equipment, and on the materials used in its construction. Mass, arrangement, and equipment, in an intelligently planned hospital, are determined by administrative principles and are especially appropriate subjects for consideration. The materials used in the general construction of a hospital also affect its cost, but this is a phase of general construction or of domestic economy rather than a special problem of hospital economics.

Given a hospital of a certain capacity, what is its proper mass? Writers have attempted to show that for each hospital bed it is possible to establish a normal mass—so many cubic feet of construction for each bed, and no more. Such a pronouncement cannot be valid because of wide variations in the class or classes of patients sheltered, and because of the range of service performed in hospitals organized for different purposes and upon different lines. Private room service for a given number of patients consumes more space than ward service, and one hospital may properly have many private patients, another few or none. As hospitals increase in size, the number of distinctive clinical departments grows, and their differentiation calls for an increase in the ratio of service space to ward space. In the United States today, carefully planned general hospitals range in mass from 8000 to 16,000 cubic feet of construction (occasionally even more) for each patient's bed, and the higher as well

as the lower of these limits has been explained and defended on grounds of administrative policy.

In order to gain a better idea of current hospital practice, I shall discuss as briefly as possible the principal elements that determine the size, mass, and cost of a hospital building, and in this discussion I shall confine myself almost entirely to American practice. In approaching this subject, one thinks first of all of those parts of the hospital that are occupied by patients, of the various types of wards and rooms, and of their relative numbers, cost, purpose, and value.

The relative numbers of private, semiprivate, and ward patients influence in a marked degree the size of a hospital building of a given bed capacity. While beds occupying single private rooms ordinarily consume more space than an equal number of ward beds, such variations are encountered in the size and arrangement of wards as well as of private and semiprivate rooms that the situation may be reversed if one compares the most generously planned ward with the most economically planned private rooms.

In parts of the United States where hospital planning is regulated by local legislation, the minimum cubic space allowance for patients in public wards is only 800 cubic feet. With the existing tendency to the use of low ceilings, say 10 feet in height, an allowance of 800 cubic feet per patient corresponds to 80 square feet of floor space per bed. American authors usually propose the more liberal standard of 1000 cubic feet. A private room based on the minimum requirement of 800 cubic feet would measure only 8 by 10 feet, but rooms so diminutive are extremely rare. Rooms 9 feet 6 inches by 13 feet, 10 by 14 feet, 10 by 15 feet, and 11 by 16 feet are more common. De luxe rooms are, of course, larger. These measurements do not include the private or individual toilets or baths that are nowadays so widely used, not so much for the patient's comfort as to facilitate nursing service.

Often the surprisingly favorable showing of a strictly private hospital, made up entirely of single bedrooms, is due to its restricted incidental requirements, for while, on the one hand, such a hospital requires more space for the mere shelter of its patients, its requirements are relatively contracted in other respects. The strictly private hospital, for example, has no need of a dispensary or of a social service department. Its laboratory program is likely to be a limited one, excluding research, and its intern staff and resident nursing staff are relatively small. Thus increased space requirements in the wards or patients' rooms are counterbalanced by reduced requirements elsewhere.

The greatest space demands are made by hospitals that care for both private and ward patients. Such hospitals provide space-consuming private rooms and their accessories, as well as all of the liberal features of a public hospital with respect to scientific investigation, teaching, convalescent care, social service, and follow-up work.

Of two possible ward plans, that which presents the smaller mass will usually be the cheaper to build and to maintain, but it does not follow that the plan that goes furthest toward economizing space is the better plan in a functional sense. An examination of the housing of a group of ward patients will make this clear.

If it is assumed that 80 square feet of floor space is sufficient for a patient's bed in an

open ward having the advantage of free exposure and cross ventilation (the legal minimum in parts of the United States), the most economical plan for sheltering 30 such patients would be to place them in a single room say 20 by 120 feet, having a total floor area of 2400 square feet. Wards of this general character (usually somewhat wider) were at one time common in the United States and elsewhere, but since it is now generally perceived that the environmental needs of all of the patients in a numerous ward group are not constantly the same, and that the separation of certain patients from the main group (for example, moribund, delirious, infectious, and postoperative cases) is desirable, modern hospital wards are frequently split into a number of separate rooms (larger and smaller wards and "quiet" rooms), each of which should be directly accessible from a common corridor. But the greater the subdivision of the ward, the greater the area of the interior corridor, every part of which must be added to the minimum ward area of 2400 square feet. We have here a case in which increased cost is accompanied by a parallel increase in ward efficiency, justifying the greater outlay. In the United States today, the least expensive type of ward, the large open ward of 25 to 30 beds, has few if any advocates. Let us review a fair example of modern American practice in ward planning.

An architect was asked to submit a plan for a double ward of a capacity of fifty patients (25 men and 25 women; or 25 medical and 25 surgical cases, all men or all women). The plan submitted called for a building 275 feet long, with loggias extending from each end. An 8-foot corridor, which penetrated the building from end to end, was placed off center, being flanked by rooms 16 feet wide on one side and 12 feet wide on the other. A number of larger and smaller projecting balconies were directly connected with the wards. At the center of the stem a side service corridor was placed, into which opened elevators, ward kitchen, central utility room, linen room, nurses' station, treatment room, flower room, and cleaners' closet.

Following the modern American trend, the patients were divided into small groups, the largest wards containing four beds each. A comparison of these details with the details of a two-story ward building designed by Dr. John S. Billings for Johns Hopkins Hospital, Baltimore, about fifty years ago reveals the influence of changing administrative standards upon ward planning. Doctor Billings' plan, remarkably advanced for its day, but nevertheless displaying a large open ward of 24 beds as its principal feature, was submitted as a scheme for the wards of Johns Hopkins Hospital and was accompanied by the following note: "The plan is not intended to apply literally to all the pavilions, but only to give a general outline of arrangement. I have placed the width of the main ward at 26 feet. If it be made wider, up to 30 feet, it will be better, but the length, 96 feet, must not be diminished." Doctor Billings evidently thought that he might have been too niggardly in allowing only about 100 square feet of floor space for each patient in a 24-bed ward, but he did not suggest that it might be desirable to split the 24-bed ward into smaller units. He was, however, in advance of his time in including in the ward scheme service small wards—two for patients "who may require separate rooms not on account of acute or dangerous disease but because of nervous-

ness, irritability or weak eyes," and one "for acute, febrile and doubtful cases, in which special modifications of light and temperature are desirable." The one-bed ward, he explained, "when not occupied, might be used by the physician as an examining room."

From this comparison of older and newer "public" ward units, which tells its own story, I shall proceed to a consideration of the utilization of space for the care and service of private and semiprivate patients, and if the foregoing analysis be compared with that which immediately follows, it will be seen that with the subdivision of the large "public" ward into many smaller units, the most striking differences between ward planning and private room planning tend to disappear.

A study of hospital building costs that I presented some time ago to the American Hospital Association deals with a familiar type of hospital building designed for private and semiprivate patients (in contradistinction to "public," "free" or "ward" patients). The form considered was that of a building 44 feet wide by approximately 200 feet long. The width, 44 feet, represents an 8-foot corridor flanked by two rows of rooms, each of which is 16 feet deep. The additional 4 feet of width is consumed by the walls of the building and by lengthwise partitions. The ground area covered by such a building is 8800 feet. The free floor area available for service, after allowing for walls and lengthwise partitions, is 8000 feet, and with a floor-to-floor height of 12 feet 4 inches each story represents 100,000 cubic feet of actual construction.

Those who are familiar with hospital planning will not be surprised at the statement that a very considerable proportion of the available floor area of 8000 square feet (40 by 200) is utilized for purposes apart from the immediate care of the patients, that is, the actual placing of beds and bed accessories. The 8-foot corridor alone, if extended throughout the length of the building, consumes one-fifth of the total floor space. With the introduction of solarium and veranda, another slice of floor space disappears before the first bed is located. Then come stairways, elevators, elevator lobbies, examining and treatment rooms, toilets, baths, chart rooms, kitchens, utility and sink rooms, linen closets, flower closets, cleaners' closets, supply closets, telephone booths, chutes, ventilating ducts, pipe shafts, and perhaps a graduate nurses' sitting and locker room.

A plan embodying all these features in a form not unduly extravagant might consume 1920 square feet of floor space (the equivalent of 12 rooms each 10 by 16 feet) for stairways, elevators, and the whole gamut of service rooms, 800 square feet for solarium and veranda, and 1440 square feet for the corridor—a total of 4160 feet, which, deducted from the whole area available, 8000 feet, leaves only 3840 feet, equivalent to 24 rooms 10 by 16, each room available for two beds, or 12 wards 20 by 16, each available for four beds. The floor area per bed here allowed is only 80 square feet, and on this basis it would be possible to accommodate 48 ward or semiprivate patients within the assumed area.

For the best type of construction and finish, the cost of such a floor of 100,000 cubic feet (equipment, fees, and all incidentals included) would be, in the eastern part of the United States, about \$96,000. The basic figure in this calculation is eighty cents per cubic foot for excavation, construction, and complete fixed equipment. Since round numbers are always

easiest to grasp, let us assume that the cost would be exactly \$96,000 or \$2000 per bed, and please note especially that I am not suggesting that a complete hospital of 48 beds can be built in its entirety for \$2000 per bed. We are considering merely the patients' floors of a more or less typical American private and semiprivate hospital of middle grade.

If it is thought advisable to provide a considerable number of separation or quiet rooms, and if the plan is changed so as to provide 16 double rooms and 8 single or separation rooms, the total capacity of the floor will be 40 beds instead of 48, and the cost of construction per bed will be increased to \$2400.

Another possible variation is the utilization of the equivalent of three 10-by-16-foot units, or 480 square feet, for two two-bed rooms with a connecting semiprivate bath and toilet between them. This latter modification results in the loss of approximately one-third of the possible maximum capacity of the floor (not quite this, since there is some gain from the elimination of public baths and toilets), while the cost of construction per bed rises to approximately \$3000.

Under the most favorable conditions of planning, small single rooms without private baths or toilets would also cost about \$3000 per bed, or perhaps a little more. For a not uncommon type of high class single room construction, providing rooms of liberal size, a fair proportion of private baths and a still larger number of private toilets, the floor area under consideration would yield accommodations for 25 patients, at a cost of \$4000 per bed, while certain highly refined plans of equal area show as few as 20 private rooms, at a cost of \$5000 per bed.

The foregoing calculations are made for the purpose of reflecting a not uncommon type of American hospital building and of affording an opportunity for comparison with the hospital practice of other countries. It is, of course, altogether a matter of administrative program how the available floor area of a given building shall be subdivided, hence the hospital authorities, not the architect, are ultimately responsible for the character of a ward or semiprivate patients' building, its capacity, and its relative cost.

It is an elementary principle that costly service features must not be multiplied so freely as to absorb an unduly large proportion of the hospital's capital investment, and yet precisely this error is creeping more and more into American hospital planning. Eagerness to excel in the richness of mechanical equipment has led more than one well-intentioned hospital executive to sanction reckless expenditures for fixtures costly to install, troublesome to maintain, and insufficiently used to justify their inclusion in the plan.

Attention has already been called to the fact that in the United States today carefully planned hospitals range in mass from 8000 to 16,000 cubic feet of construction, occasionally even more, for each patient's bed. A partial explanation for these wide variations will be found in the study of space-consuming professional departments that lie beyond the area devoted to the shelter and immediate care and treatment of bed patients.

At this moment, dispensaries or out-patient departments are being planned for two neighboring general hospitals of about 600 beds each. One of these hospitals estimates its dispensary requirements at 200,000 cubic feet. The other demands a dispensary of 500,000

cubic feet. The larger of these two dispensary buildings will be used for undergraduate teaching; the smaller will not.

The growth of the out-patient department has had a marked effect on the total cost of hospital construction during the past decade. The development has been both quantitative and qualitative. Hospitals that considered out-patient departments unnecessary twenty years ago now find them indispensable. Those that formerly gave rather careless service to out-patients are now disposed to look upon this service in a more serious way and to plan for it much more generously. Thus, in place of a dispensary occupying 14,000 square feet, a hospital in an Eastern city is about to erect a new dispensary building having a total floor area of 80,000 square feet.

Comparable to the expansion of the out-patient service is that of the x-ray department. In place of the single radiographic machine which was the total equipment of hospitals of from 100 to 500 beds twenty years ago, four, six, or eight separate machines are now required for diagnostic and therapeutic purposes. Instead of departments that at one time were content to occupy 300 or 400 square feet, we find modern departments occupying from 3000 to 10,000 square feet. Incidentally, it may be observed that the construction of the x-ray department with its exacting technical requirements is particularly costly.

The claims of the biologic, chemical, and pathological laboratories—departments which, like the x-ray department, are expensive owing to their elaborate technical arrangements—are equally pressing and significant. I have observed closely the growth of laboratory work in a hospital that in twenty-five years has increased in bed capacity from 200 to 600 beds, its laboratories meanwhile advancing in successive steps from a modest beginning of 200 square feet to 4000 and then to 10,000 square feet. Today, the 10,000 square feet available is considered far from adequate, and is in fact 50 per cent less than the laboratory space that other hospitals of the same size and scientific pretensions are profitably employing. All of the clinical departments of the hospital now demand laboratory support, in constantly increasing measure. Blind reliance on laboratory procedures and reports may be affecting clinical judgment in a somewhat dangerous manner. If so, this argues not for the curtailment of laboratory activities, but only for the proper application of laboratory findings.

In European hospitals physiotherapy has long held a prominent place. As a rule, the area set aside for this department in American hospitals is not an extensive one. There exists, however, a widespread belief in a future of greatly enhanced usefulness for this department, and on this account prudent planners endeavor to place it strategically, with an eye to its future expansion. The creation of a department for the investigation of medical physics in one of our great medical schools is an event of significance to hospital planning.

Quietly but relentlessly, during the recent period of hospital expansion, surgeons have been increasing the number of their operating rooms so that in place of the single pair of operating rooms that were regularly deemed sufficient twenty years ago for a hospital of 200 beds, hospital architects today encounter a demand for five or six such rooms. Hospitals of 500 or 600 beds, formerly content with four operating rooms, now insist upon a dozen. The principal reasons for this expansion are the multiplication of surgical procedures or

the expansion of surgery into new fields and the shortening of surgical convalescence. The hospital which employs a full-time surgical staff is in a position to use its operating rooms far more intensively than is the hospital which is dependent upon surgeons who have an outside practice, but the full-time staff is a rarity in hospitals of the United States. A fairly typical instance of modern operating room planning is that of a 650 bed hospital which has set aside, as a surgical center, a floor area of 14,500 square feet in which there are distributed 13 operating rooms and their associated service rooms. This space does not include the rooms devoted to the preparation and sterilization of surgical dressings, to which an additional space of 2500 square feet is assigned.

The modern American hospital uses constantly its clinical conference room, and with the introduction of formal and informal postgraduate medical education, other lecture and demonstration rooms are required in ordinary hospitals that are not teaching hospitals in the university sense. In many communities, fortunately for medical science, the cult of the autopsy has taken strong hold, and pathologic material is exhibited not only to the hospital staff, but to invited medical guests for whose accommodation demonstration rooms of suitable size and character must be provided.

A striking example of the manner in which hospital mass grows in conformity with changing administrative methods and ideals is afforded by a study of clinical record rooms. Among the prized possessions of a New York hospital, which is now about seventy-five years old, is a series of heavy leather-bound volumes containing the clinical histories of the hospital's earlier years—authentic records of the quaint medical practice and standards of our forefathers. For each clinical history in the 1870's, twenty or thirty sententious lines generally sufficed, notwithstanding the fact that the average period of hospital care at that time was about double what it is today.

But an era has dawned in which clinical observations are fortified by numerous laboratory tests, and in which each hospital patient is an object of interest and study not to one clinician but to a group of clinicians, so that the records of individual patients nowadays assume monumental proportions. In the central record room of a moderate sized hospital the current histories alone embrace many thick volumes, but so active is the practice of statistical research that clinical histories must now be kept in a handy place for ten or fifteen years from the date of the original records. The sorting, filing, and handling of these records call for the employment of a considerable staff for whom working space must be provided, and in the record room or close by space must be reserved where histories may be assembled by members of the staff engaged in their collation. Concrete cases are perhaps most illuminating and, as in the case of the pathological laboratory, there comes into my mind the example of a hospital that is preparing to set aside for this purpose more than ten times the space that was considered sufficient twenty years ago.

Conspicuous among the forces that have added to the cost of hospital construction is the growth of the department of nursing. Twenty years ago the nursing department of a general hospital expected that accommodations for nurses would be provided in the ratio of one nurse for each three hospital patients. In certain parts of the country today the current

ratio is one to two, an increase of 50 per cent. Elsewhere hospitals are adopting a ratio of two to three. An advance from a ratio of one to three to a ratio of two to three implies an increase of 100 per cent in the cost of building for the nursing department. Actually the increase has been much greater, for while the number of nurses has doubled, the character of nurses' homes has undergone radical changes. Bedrooms shared by two or more nurses have generally given way to single rooms, narrowly restricted living quarters and scanty recreational facilities have been replaced by accommodations of a far more spacious character, and in place of almost ludicrously inadequate teaching facilities current practice prescribes full-fledged school equipment, including classrooms, laboratories, reference libraries, instructors' offices, assembly and demonstration rooms. The transformation of the school of nursing has now progressed so far that an up-to-date school requires for dormitory, recreational, and teaching purposes not less than 4000 cubic feet for each nurse in place of the former average of 2000 cubic feet.

Thus we find that changes in administrative practice and standards have necessitated within a twenty-year period the construction, for the purposes of the nursing department, of four times as much space as was formerly required—space for twice as many nurses but in addition twice as much space for each nurse. At the same time, the substitution of fire-proof buildings, with interior sanitary finish and a multiplicity of plumbing fixtures, for brick or even wooden buildings of a much simpler character has at least doubled the cost of each cubic foot of construction. Further to accentuate the contrast, there has occurred, as everyone knows, a change in the general price level. And so we find that the capital outlay required today for the housing and teaching of nurses in a typical American general hospital is actually from eight to twelve times as much per patient as the sum that was required twenty years ago.

The modern hospital community is a multitudinous one, embracing many groups of high and low degree. Next in importance, in point of numbers, to patients and the nursing group, are the household or domestic employees, whose mode of life is not without its influence on hospital efficiency. The greater the stability of these groups, the better for the hospital and its patients, for the permanent or semipermanent employee acquires an understanding of his job and a sympathy with the purposes of the hospital that are invaluable. In the United States it is generally true that the domestic worker for whom a comfortable domicile is provided by the hospital is likely to remain longer in the hospital's service than the employee whose sole compensation consists of a meager salary. Hospital dormitories will not on this account commend themselves to the social reformer who is especially interested in the cultivation of normal family life, to which the institutional dormitory is a hindrance, not a help. But here we are considering hospital planning and especially the question of the mass of hospital buildings in relation to the cost of hospital construction and efficiency, and from this point of view we observe that, as experienced hospital administrators turn their thoughts to the question of suitable living quarters for their employees, the use of odd corners of buildings designed for other purposes tends to yield to a strong demand for suitable dormitory buildings which are an asset to hospital administration.

Dormitories for domestic workers differ from those designed for nurses in the more modest size of single bedrooms (when such rooms are employed), in the more frequent use of bedrooms designed for the common occupancy of two or three persons, in a simpler type of finish, in the restricted size of common living and recreation rooms, and in the uniform absence of separate kitchens which are sometimes found in the larger or more isolated nurses' homes. Another distinction, important from the standpoint of building mass, is the fact that while the entire permanent nursing force of American hospitals is regularly domiciled in hospital buildings, a small fraction of the domestic servant group, a larger fraction of those employees who are engaged about the hospital in mechanical pursuits, and a still larger proportion of clerical workers, laboratory technicians and the like, are not. Notwithstanding these limitations, the dormitories and living quarters of miscellaneous employees and also of the resident medical staff and of certain executive officers make up an item with which the hospital architect must reckon seriously.

The accompanying comparative table represents space allowances that are likely to be found in the building program for a hospital of 500 beds. This would be equivalent to one-sixth of the total cubic contents of a general hospital of a fairly high grade, caring for 500 patients of all social classes (say 250 private and semiprivate patients and 250 ward patients). For the purpose of this calculation I have taken the figure of 12,000 cubic feet of total hospital construction for each patient's bed.

For 300 nurses (combined school and home for the entire number)	1,200,000 cubic feet
For 300 miscellaneous employees ($\frac{2}{3}$ to be lodged in the hospital)	600,000 cubic feet
For 30 medical residents or interns	100,000 cubic feet
For executive officers and a number of small special groups (anesthetists, dietitians, etc.)	100,000 cubic feet
Total	2,000,000 cubic feet

2. Preparing the Building Program for a General Hospital, by S. S. Goldwater, M.D.*

IN a report prepared for the committee on construction of the American Hospital Association several years ago, an attempt was made to point out the more important questions that demand consideration in the first stages of the preparation of a building program for a general hospital. The following restatement of the subject has been developed from the earlier text. Again an attempt has been made to be brief rather than discursive, suggestive rather than comprehensive. This article makes no pretension of conveying technical instructions for the actual planning of a hospital, a task that would require a far more voluminous text and a much more elaborate method of treatment.

The capacity of the hospital is the first point the building committee is called upon to determine, and often an initial figure is arbitrarily proposed which bears no real relation to

* Adapted from *Mod. Hosp.* 38:49-55, Mar. 1932.

actual needs. In other instances the starting point is a given sum of money; when the size of the available building fund is known, a rough estimate is obtained of the "cost of construction per bed" (an alluring but often a misleading term), and the size of the hospital to be built is thus determined. It is true that one is often compelled to cut one's garment according to the cloth, but in the planning of a hospital this is a poor rule, for even if the amount of money available is insufficient to build immediately the hospital that the community needs, an ideal program may wisely be formulated in the hope that it will be realized step by step. It may even happen that a clear and irrefutable statement of needs will enlist support previously lacking.

In determining the size of a hospital, the population to be served is the first element to be considered. Number, character, and rate of growth call for separate attention. Relevant questions are the economic resources of the community, prevailing occupations that involve special health hazards, the manner in which families and individuals without family ties are housed, hospital facilities already available in the neighborhood, the sickness rate of the community, the presence of groups possessing special characteristics or customs (a racial group may be noted for its unusually large birth rate or for its habitual employment of midwives instead of doctors), and institutional preferences or prejudices associated with racial characteristics or religious beliefs.

What is the best size for a hospital? For a theoretical answer to this question the reader is referred to an article entitled "The Drift Toward Hospital Amalgamation," published in *The Modern Hospital* in January, 1928. Reasons are there given for preferring a general hospital of from 500 to 600 beds; but without forgetting the principles involved in the most efficient organization of a complete general hospital, we must admit that a small community or even a larger community, in special circumstances, may be justified in planning upon a different scale. It is of the utmost importance that the building committee formulate its problem and state the reasons that justify its chosen program.

To determine the total number of beds is of course only the first step. How should these beds be classified? What proportion of the total number of patients to be cared for are likely to be in a position to meet the cost of private rooms? What will be the net cost of maintaining a private patient in a large room with bath, in a moderate sized room with private toilet, in a smaller private room of the utmost simplicity, or in a partitioned cubicle? Are rates equivalent to the estimated costs customarily paid by private patients in the same community? If such rates are not paid, is it reasonable to assume that the hospital will be called upon to rent its private rooms at less than actual cost, and in that case will the resources then be available to balance the budget? How many patients will seek, or should be persuaded to accept, semiprivate accommodations? Shall semiprivate wards contain two, three, or four beds each? For how many patients may "public" ward beds appropriately be provided? Is the community one in which the incomes of a considerable part of the population fluctuate, and should the hospital plan, therefore, be of so flexible a character that the line which separates public from semiprivate wards as well as that which separates the semiprivate from the private room service may be readily shifted? What is the

largest acceptable size for a public ward? (In this connection, cost of construction, cost of maintenance, and the prevailing local standards should be considered.) What comforts (day rooms, dining rooms, separation rooms, solariums, roof gardens) should be provided for the patients? Which of these ward accessories can be used in common by patients of different social classes or of opposite sexes and which must be duplicated? Is it possible to plan in a manner that will permit optional ward appendages to be discarded, if the financial position of the hospital should eventually require the sacrifice, without redesigning the entire structure?

If the building program has to do with the expansion of an old hospital, to what extent can the existing buildings be adapted to the larger program? Are these buildings reasonably safe as fire risks? While no useful structure should be hastily discarded, the retention of a small building of slight value in a location where it will prevent for all time the most advantageous utilization of a hospital site for an important group of buildings should not be thoughtlessly agreed to.

What is the contemplated scheme of clinical organization? Besides the basic departments of medicine, surgery, obstetrics, and pediatrics—essential elements in a general hospital—what clinical branches are to be recognized? In this connection, consideration must be given to the diseases of women, diseases of the eye, ear, nose and throat, venereal diseases, urology, orthopedics, dermatology, tuberculosis, metabolic diseases, neurology and psychiatry. Is it desirable to prepare in advance for future clinical classifications not now commonly recognized? Will the medical and surgical specialties, so called, be organized as independent departments, or will they function as minor subdivisions of the major departments of medicine and surgery? Will children belonging to the "specialties" be housed with or near adult patients of similar classification, or will all children be placed together in an independent department or institute, physically divorced from the adult service? And, finally, what is to be done about contagious diseases? This is a question that must be answered with due regard to local sanitary regulations as well as from the standpoint of hospital and community need.

The characteristics of a site appropriate to the present and future building program should be defined before a selection is made. The volume and character of the work to be done and the determination of the type of building or buildings best suited to this work will point the way to the proper size of the site. Study of the residential distribution of the population to be served should influence the choice of location. From the standpoint of actual construction, the size, shape, and contour of the plot, and the character of the soil as related to the foundations are to be reckoned with. Water supply and drainage will be considered as a matter of course. Accessibility is an item of some importance. In crowded cities in which acreage is scarce, hospitals should make every effort to obtain sites adjoining public parks. Two or three acres in an accessible location immediately overlooking a large park may be more valuable for community hospital purposes than twenty acres in a distant locality (always assuming that space can be reserved or acquired for future expan-

sion). Sky, trees, grass, and flowers are sources of pleasure, inspiration, and mental and bodily health, and are worthy of a place in every hospital program. Depressing surroundings should be avoided and undesirable encroachments guarded against.

The immediate building program and the future expansion of the hospital should be considered separately. Clinical expansion may be anticipated in two directions. In the case of a general hospital in which the various clinical specialties are at the outset either unrepresented or incompletely represented, the subsequent introduction of additional clinical departments may be taken for granted, while in the case of a hospital that is completely organized at the outset, the probable rate of growth of each of the different clinical divisions must be considered. The expansion of therapeutic departments and of the administrative organization of the hospital should not be overlooked. Consider also possible changes in function. Is the hospital likely from time to time to undertake new space-demanding activities such as preventive medicine or popular health education?

Are separate convalescent wards desired, or is there to be an affiliation with a branch hospital for the treatment of convalescents? To what extent will such an affiliation result in accentuating the demands on the main hospital and in increasing its daily or monthly patient output, thus necessitating additions to the staff and the extension of resident staff accommodations and increased treatment facilities?

In the teaching hospital special needs are encountered. Lecture rooms and a library must be featured, the out-patient department expanded and modified to satisfy the needs of student assistants, living accommodations for residents proportionately increased, and locker rooms, toilet accommodations, lunchrooms, and perhaps a separate entrance for medical students provided. Private consulting offices may be required for members of the staff whose time is pledged chiefly to the teaching service of the hospital but who are granted the privilege of private intramural consultations. Physical and administrative relations between the hospital and the laboratories of the medical school demand consideration. A clearly defined method of procedure acceptable to the staff, not an outmoded precedent, must be the architect's guide in determining the need and size of amphitheaters, classrooms, and demonstration rooms.

The location, size, and equipment of the clinical record room depend in part on the proposed method of administration. In some hospitals the clinical records of both in-patient and out-patient departments are assembled at a single center. It is wise to provide proper space in the record room for the accumulation of the records of at least ten years, but as records may be valuable for medico-legal or scientific purposes for a much longer period, additional fireproof storage space for older records is indispensable. The modern record room is not merely a storage or filing place. It is a statistical research center, and it should therefore include ample space for the private examination of its accumulated material by independent groups of investigators. Among the essential requirements of the record room are accessibility and quiet.

The complete hospital includes a medical library. In hospitals of moderate size it seems

desirable to locate this near the clinical record room, so that the same person or persons can supervise both the library and the clinical record room. In teaching hospitals the size and location of the library should be adjusted to the requirements of undergraduate students.

The number of operating rooms should be calculated with relation to the total number and kinds of surgical cases to be treated and with due regard to the organization and working methods of the staff. In a staff or "closed" hospital the number of operating rooms required is relatively smaller than in an "open" hospital where the working habits and convenience of a larger number of visiting surgeons enter into the case. The special needs of the eye, ear, nose and throat, orthopedic, and urologic departments call for consideration, but it is uneconomical and may be unnecessary in a relatively small hospital to assign to each group operating rooms for exclusive but only occasional use.

The architect will need guidance in planning operating room accessories. How large a dressing and locker room is desired for the visiting staff? Does each surgeon need a private locker? Is a lounging room required? Is a separate dressing room required for the house staff? Where are the surgical supplies to be prepared and sterilized, and how much space will be required for the purpose? Will patients be anesthetized in separate rooms or in the operating rooms? Is a central recovery ward desired? Do the surgeons demand skylights or will vertical north windows be accepted? Is reliance to be placed chiefly on artificial rather than natural illumination? An emergency lighting system is indispensable. What safeguards are necessary against gas explosions? Is natural ventilation practicable? What benefits can be derived from air conditioning? What are the most desirable width, length, and height of an operating room? Consider material and color of finish. Will portable observation stands for spectators suffice, or are built-in galleries called for? In locating and designing scrub-up sinks, utility rooms, and fixed equipment generally, the requirements of both convenience and asepsis should be remembered.

Before planning the laboratory it is desirable to get the fullest information possible from those who are to be in actual charge of the laboratory work. All of the laboratory work of a small hospital can be done in a single room, but in that case the equipment of the room will be most varied. In larger hospitals, separate rooms are usually wanted for (1) pathology and histology, (2) bacteriology and immunology, (3) biologic chemistry, (4) routine clinical pathology, and (5) hematology. The manner in which the house staff and the medical students, if there are any, are to participate in the laboratory work of the hospital should be defined. Laboratory facilities of a modest kind may be demanded in connection with each ward. The hospital should define its policy in relation to scientific research. If laboratory investigations are to be intensively prosecuted, rooms and equipment must be provided for this work apart from those intended for routine work. Quarters for test animals are essential, and for a research laboratory an animal operating room will be required. The location and ventilation of animal rooms must be such that odors will not reach and offend patients. The location of the major laboratories in a position accessible to in-patient and out-patient departments has certain advantages, but this location may not be a good one for the morgue and autopsy room. Ambulatory and other patients may be brought to

the laboratory for investigative purposes, and suitable accommodations must be provided for them.

The plans for the department of radiology, embracing radiography, fluoroscopy, and radiotherapy, call for careful study, to which the radiologist should contribute. The staff should decide whether all x-ray examinations and treatments are to be carried out in a central department, or whether fluoroscopic tests and certain combined x-ray and clinical examinations and treatments are to be done elsewhere. How, for example, is the x-ray work that is associated with urology to be handled? A room in the x-ray department where radiography can be done in conjunction with the surgical treatment of fractures and the examination of foreign-body cases will probably be demanded. The use of a portable x-ray unit in the wards should be considered. The x-ray service of a large hospital is a voluminous affair, and due consideration must be given to office requirements, waiting room needs, dressing and rest rooms, equipment for examination of films, and the functioning of the all-important developing room.

Other diagnostic and therapeutic divisions are the cardiographic laboratory (with a small dark room attached and with or without its special system of ward wiring); the respiration laboratory, which for convenience is often associated with the chemical laboratory; a department for radium treatment; a physiotherapy department, including facilities for hydrotherapy, thermotherapy, and mechanotherapy; and a department of occupational therapy. The extent and character of the proposed dental service require definition. The satisfactory recording of certain clinical phenomena demands the use of photography.

Receiving or observation wards, which are difficult to classify clinically owing to the miscellaneous character of the service demanded of them, nevertheless facilitate greatly the proper classification and handling of newly admitted patients. What shall be their capacity? To answer this question intelligently the hospital's probable admission rate and its method of handling newly admitted patients must be known. Shall the children's detention ward be part of the general department for new admissions, or can it be more advantageously correlated with the pediatric service? What facilities are required, in the central admitting department or elsewhere, for the detention and observation of mentally disturbed patients? Is it desirable to combine with or append to the receiving ward space for the overnight care of tonsil and adenoid cases?

Is the hospital locality one in which accidents are many or few? Will a single emergency treatment room suffice? An emergency treatment room or rooms and the ambulance entrance should be close to the receiving wards. What are the most desirable relations between this section and the major operating rooms and the x-ray department? How near are bedrooms for the resident staff members who are subject to night emergency calls?

Balconies, roof wards, and solariums comprise a group of facilities of importance to effective medical care, and the building committee must decide upon their number, size, exposure, screening, and their equipment for possible use as emergency or overflow wards.

The plan of the out-patient department may be a liberal one, including separate accommodations for the departments of medicine, pediatrics, obstetrics, neurology, mental hy-

giene, dermatology and syphilis, surgery, diseases of the eye, ear, nose and throat, gynecology, orthopedics, gastrology, dentistry, infant hygiene, and adult hygiene. A more modest program may be chosen, one that requires that groups of departments utilize the same rooms at different hours. In estimating out-patient capacity it must be remembered that the capacity of a department may be doubled by holding two daily sessions instead of one. The utilization of an out-patient department for teaching purposes markedly affects the character of the plan. Other factors to be considered in out-patient planning are: central or common record room *versus* individual departmental record keeping; the manner in which patients are to be received and their histories taken; whether or not a classifying examination is to be made before the patient is assigned to a special clinic; a flexible central waiting room *versus* individual departmental waiting rooms; unrestricted attendance *versus* a regulated appointment system; the utilization of the out-patient department as a clinic for paying patients or for follow-up work in connection with the hospital's ward service; the conduct of out-patient social service work in central offices or in the various clinics, or both; the advisability of providing a lunchroom for waiting patients; the location of temporary detention rooms for contagious suspects and the exit therefrom; the relation of the out-patient department to the receiving and emergency wards; recovery and rest rooms in the surgical departments; the productive or time-saving value of duplicate dressing cubicles in connection with simple examining rooms; utilization of laboratory and therapeutic facilities of the hospital proper *versus* separate out-patient department equipment; departmental laboratories for individual clinics; elevator service; ventilation (natural and forced); choice of location for individual departments (daylight is more important for some than for others, while quiet is not equally essential for all); choice of materials for the interior finish as an aid to cleanliness and ease of maintenance.

For the planning of the administrative or business center of the hospital, certain information is requisite: the number and functions of the hospital's executive officers; the number of officials connected with the training school for nurses; the number of heads of other administrative departments; the number of employees in the accounting department; the method of receiving, registering, and admitting patients (all patients may be received at a single entrance or a separate entrance may be provided for private patients or for children); the numerical strength and methods of the social service organization. The telephone system calls for careful consideration. Location of the telephone "central," booths for public use, and the interior and exterior telephone service for the officials, staff, and employees must all be carefully planned. What other systems of communication and of signaling can be employed advantageously? Is a clinical conference room requisite? If so, what size should it be and should it be made accessible to nonstaff visitors? The location of the staff's registration room and the location and number of staff sitting rooms, lounging and locker rooms, and consulting offices should be considered.

Among the topics to be considered in connection with the nurses' home are: total capacity; correlation of the teaching facilities with the teaching program, number and size of the classrooms, capacity of the assembly hall, classification of laboratories, arrangement of

demonstration rooms, and number of instructors' offices; library, reception and living rooms; students' bedrooms—their size, ventilation, closets, and lavatories; special quarters for night nurses; bathing and toilet facilities; location and access to special quarters for ward attendants or nurses' aids; balconies and sleeping porches; nurses' infirmary; recreation room; gymnasium; servants' quarters; linen, trunk, and storage rooms; nurses' kitchenettes and hand laundry; tennis court; swimming pool; connection between the nurses' home and the hospital. In smaller hospitals the nurses' meals are usually served from the central hospital kitchen. Larger hospitals often prefer a separate kitchen for the nurses' home as well as separate dining rooms for students, graduates, officers, and special nurses. A locker and dressing room for nonresident nurses should be provided in the nurses' home or elsewhere.

Dormitories and living rooms apart from those in the nurses' home are required for the superintendent (frequently the superintendent has a cottage of his own on or off the hospital grounds), for executive assistants, and for the resident medical staff. Accommodations may be needed for interns of both sexes. Special rooms or suites for senior residents are to be considered. Recreation space for the resident staff is desirable. A staff house like the nurses' home is no longer unusual. Separation of staff quarters from the hospital proper, if the distance is not excessive, may add to the comfort of both patients and staff. Local custom and local circumstances will determine how large a percentage of the domestic and other miscellaneous workers shall be lodged in hospital buildings. The question of locker and lounging rooms for nonresident workers is complementary to the question of dormitories.

No attempt should be made to plan a hospital kitchen and its accessory serving rooms without previous agreement upon a food service scheme. It is essential to know not only the number of persons to be fed but also whether food is to be sent to the wards and private patients' corridors in bulk or on individual trays; whether a common kitchen or separate kitchen installations are wanted for private and ward patients, as well as for the hospital and the nurses' home, respectively; whether there is to be a special diet kitchen for "feeding" cases; what work is to be done in the ward pantries; whether pupil nurses and pupil dietitians are to be instructed in the main kitchen, the hospital diet kitchen, or in a special dietetics laboratory.

The storing and handling of perishable and nonperishable food supplies call for careful consideration. The location of the offices of the dietitians is important. The capacity of the dining rooms for various classes of hospital inmates must be studied, and the question of waitress service *versus* self-service considered. Frequently an interchangeable plan will be thought best. In large hospitals, it is desirable that the medical, administrative, nursing, and domestic service groups be afforded convenient and separate access to their several dining rooms.

The laundry should be planned with relation to the volume and kind of work to be done and should be located in a manner convenient for service. It should nevertheless be located where the operation of its machines will not annoy patients either by vibration or

by noise. The most modern labor-saving devices should be installed. Future growth will naturally receive consideration. The architect should know whether the hospital proposes to reclaim used surgical dressing gauze; how much space is wanted and in what location for sewing and mending, for the storage of linens, and for distributing laundered goods. The method of collecting soiled linen and the utilization of linen chutes must be considered. Sufficient space should be available for the storage of laundry trucks. Sanitary conveniences for the laundry help should not be far off. The functioning of "auxiliaries" in connection with the linen department frequently calls for an allotment of space.

Whether the clothing of ward patients is to be cared for in rooms adjoining the wards or in a central clothes room for patients is a matter of hospital policy. Prior to storage, patients' clothes may require steam sterilization or fumigation; after storage, cleaning and pressing.

It is for the hospital to determine the exact nature of all the miscellaneous fixed equipment required for nursing or other purposes in connection with each ward unit, remembering that all wards are not alike in their requirements. The best results will be obtained when the numerous details of ward management and service are systematically reviewed in conference with the hospital superintendent and the chief of the nursing department. The ward is the focal point of all hospital service, but ward planning is a topic too complicated to be discussed here at length.

Will it be profitable for the hospital to produce its own light and power? Can the boiler equipment originally installed be expanded without costly removal or reconstruction? What type of boiler is most economical for the required service? What provision should be made for breakdown or emergency service? What fuel is to be used—coal or oil? How accessible are reliable sources of fuel supply? What should be the extent of the storage facilities for fuel? In what location will the smokestack be least objectionable? What space will be required for various workshops which the engineer will be expected to supervise? What is the most suitable type of refrigeration apparatus? What is the twenty-four-hour refrigeration demand (a) for beverage and clinical purposes, (b) for the cooling of boxes and cold storage rooms, (c) for the production of ice?

For each hospital and for each part of the hospital the problem of ventilation should be separately worked out, but an agreement should first be reached on the hygienic principles of air supply and treatment. In some instances, legal requirements will govern ventilation, but the hospital's own standards are likely to be as high as or higher than the minimum demands of the law. It is a good plan to avoid mechanical ventilation when natural ventilation will serve.

Before deciding upon the number and size of the elevators, it should be ascertained whether the visiting staff will be large or small; whether patients in bed or in wheel chairs will be sent to the roof or the garden and in what numbers; whether visitors are likely to be few or many. For hospital buildings of only a few stories, high-speed elevators are not necessary, nor for higher structures is it necessary or, in the case of patients' elevators, de-

sirable to use elevators as speedy as those encountered in office buildings. Self-leveling devices are important for food service lifts and for patient transport. The question of automatic *versus* manual controls merits careful comparison of cost and service value in each instance. Uniformly elaborate elevator equipment is not required for all departments or services. Elevator cabs should be of suitable size and designed to resist wear and tear, and emergency elevator exits are worth while.

Shall the heating system be hot water or steam? Is the city water supply ample or must it be supplemented? Is water filtration necessary? Is treatment of the general water supply desirable on account of peculiar local conditions? Is a sewage disposal plant required? What are the legal and what the practical requirements in the matter of fire stairs, fire escapes, fire apparatus, and signal systems? Is the garbage to be carted away or to be incinerated on the premises? Is a central incinerator sufficient, or are local incinerators desirable for certain departments?

The question of story heights is one that can hardly be decided until the plans are in semifinal shape. In a composite building, it is the average need that governs rather than the absolute requirement of any given room. If possible, rooms requiring unusual ceiling heights should be so located as to avoid the necessity of wasting cubage in adjacent rooms at the same floor level. Ramps solve certain problems but raise new problems of their own. No ramp is desirable; steep ramps are a nuisance and are even dangerous.

The hospital authorities should study and should express their preferences concerning the materials to be used for walls, floors, stairways, partitions, built-in cabinets and trim, interior finish, and window glass (including forms permeable to ultra-violet rays); concerning the width of corridors; the maximum and minimum size of patients' rooms; the number and location of nurses' stations and their equipment; concerning sterilizing equipment; vacuum cleaning systems; plumbing fixtures for every kind of hospital use; the length and width of doors; types of fenestration; transoms; the height of window sills; the illumination of wards and operating rooms; also in relation to built-in clothes closets; portable lockers; time-clock systems; radio service; the care of mattresses; the location and arrangement of storerooms and trunk rooms; the number, location, and equipment of cleaners' closets, flower closets, supply closets, and airing closets, and the need of a garage and a mortuary chapel.

With the guidance of the foregoing notes, the outlines of a comprehensive program for a general hospital can be prepared. At this stage it will be wise to pause and consider what the tentative program signifies in the way of outlay. This can best be done by the preparation of rough preliminary plans from which approximate cubical contents may be calculated. In this preliminary study as well as in the subsequent modification of the program the knowledge of experts of wide experience can be advantageously brought into play. New ideas should be vigorously sought and sympathetically considered but not hastily adopted. Nothing should be either taken into or excluded from the building program without a competent and impartial appraisal of its service value. It is not safe to be guided

absolutely by the opinions of departmental enthusiasts who have a valuable contribution to make but who frequently recommend peculiar devices that lack the test of time, and who cannot reasonably be expected to see the problem of the hospital as a whole.

3. How Shall We Measure Construction Costs? *by Carl A. Erikson**

If it were necessary to consider only the elements of the structure—the brick, sand, cement, and steel—it would be quite simple to discuss hospital building costs. To this fluctuating yet readily comparable quantity, however, must be added an uncertain element, the hourly wages of labor, both skilled and unskilled, and the quantity produced per dollar of wages paid. To make the question still more difficult, it is necessary to compare the efficiency and skill of various contractors. Everyone has heard unsuccessful bidders claim that the successful one “must be losing money for he is doing the work below cost.” And yet the successful contractor is often quite happy when he surveys the profits upon completion of the contract.

To add to the confusion it is necessary to compare costs of complete buildings, not merely the cost of a thousand bricks laid in the wall. Assuming that by some strange combination of circumstances it were possible to build identical hospital buildings all over the country, comparisons of costs then would be a measure of the relative costs of labor, material and contractors’ profits. But no two hospital buildings are identical and therefore the costs of entirely different structures must be compared.

To compare structures that are unlike in size, subdivision, detail, and finish, some unit of comparison, a highest common divisor, must be found. The patient’s bed is a divisor, often used but seldom found of value. To compare costs per bed, one must compare simultaneously not only all the facts of finish or quality, but a score of facts about width, size of wards and baths; the liberality of the therapeutic, diagnostic, dietary, administrative, and other departments; the provisions for future expansion and many other facts. One hospital is planned liberally and another in niggardly fashion; comparison of the two will naturally indicate the niggardly one to be the lower cost per bed, and yet it may not be the best community investment.

Cost per bed may be likened to the cost of two six-room houses. One may cost \$6000 and another \$60,000. Both are of masonry, one of stone, the other of common brick. One has a living room 30 by 60 feet with a 25 foot ceiling; the other has a living room 12 by 15 feet with an 8 foot 6 inch ceiling. One has a garage, sun parlor and terrace; the other has none of these. One has stove heat; the other hot water with oil burners. One has the best of cabinet finish; the other poorly finished mill work. The six-room house at \$6000 may be a “lemon” and the one at \$60,000 a bargain. Just so with hospitals. The cost per bed in a ward pavilion at Cook County Hospital cannot be compared with the cost per bed in the new private patients’ building at Michael Reese Hospital, both in Chicago. Nor can either

* Adapted from *Mod. Hosp.* 30:49–58, Mar. 1928. Mr. Erikson has made a few changes to bring it up to date.—Editors.

be compared with the 45-bed general hospital at Ponca City, Oklahoma, or the 200-bed one at St. Cloud, Minnesota.

But the architects must have a measure of comparison, a highest common divisor, for they must estimate the cost of a building long before drawings are sufficiently advanced to permit a contractor to do so. A few architects use the total number of square feet as their guide, but many more have found the cubic contents of their buildings a much more dependable method. In measuring the costs in this way, architects remember that it is not a micrometer but rather a foot rule.

As this method of comparison is quite commonly used, some comments on the elements that affect the cost of each cubic foot contained within the building may be found of interest. But what is meant by the cubic contents of the building? This is the volume of building contained within the outer walls from the bottom of the basement floor to the average height of the roofs. Open porches may be considered as half in and half out, and are figured that way; the enclosed porches are entirely in. Cornices, parapets, and similar projections are not included. Terraces on fill should be figured separately. If space below a terrace is used, it should be figured solid. Penthouses are included as are trenches of any size; the contents of an isolated smokestack are usually ignored.

And what are the costs? These include the total costs of all materials and labor to complete the building. In cases where materials, labor, and profits are donated, either in whole or part, these should be included at a fair price. Completion of the building so that it is ready for the equipment includes the installation of hardware, lighting fixtures, screens, floor coverings when glued to the floor, sterilizers, kitchen equipment, laundry machinery, in fact, all materials permanently attached to the building.

Because one hospital costs fifty cents per cubic foot and another eighty-five cents per cubic foot, it does not follow that the fifty cent building is the better purchase. The reverse may be the truth. It is obvious that the buildings compared must be similar in area, height, subdivision of space, equipment and finish. They must also be contracted for at the same time in the same place in order to make any useful comparisons, and no such duplication has ever arisen.

The factors that affect the cost of this hypothetical cubic foot of hospital buildings are both tangible and intangible. As discussion of the intangible is rather fruitless and usually beyond the control of the building committee and the architects, it will be avoided.

First, there are world economic conditions and their effect on the cost of labor and material.

Second, local building and business conditions obviously affect costs. In many smaller cities the construction of one large building will absorb all of the readily available local mechanics and, if other business is active, the common labor as well. Unless the community is so located that a further supply of skilled and unskilled labor may be drawn from near-by towns, the cost of the buildings invariably increases. Materials are not so readily affected by the community demands, for in the present era few of the materials are produced locally. These are the bulky materials, such as sand, gravel, and brick or clay tile.

Third, assurances that the architect's certificate will be promptly paid by having the building funds in hand; that neither the architect nor the owner is unreasonable in his interpretation of the contract documents; that both plans and specifications are so complete and clear that no guesswork is necessary, are all elements that the contractor considers when making his bid.

Fourth, it must be remembered that letting a contract is usually something of an auction sale reversed, for the "work" is sold to the lowest bidder. In preparing his bid, the contractor takes off the quantities of materials exactly and, barring errors, it is about the only thing that is exact about an estimate. With these quantities before him, he estimates the labor necessary for fabrication, erection, or installation, from his previous experience.

It is to be remembered that no two buildings are identical and that much of the contract is to be performed from eight to eighteen months after the estimate is prepared. To the total cost of materials and labor, the contractor must add his overhead, and this varies widely. Then the percentage of profits will vary still more. If he has plenty of profitable contracts on hand, the percentage will probably be high. If he has little, he will shave the profits closely. This may help to explain why contractors' bids prepared after careful quantities are drawn off from complete plans and specifications vary so widely.

It may also explain why a contractor's estimate based on an architect's preliminary sketches is usually so valueless. These drawings do not give sufficient information to take off the exact quantities to which he is accustomed. The contractor must, therefore, estimate quantities as well as the items of labor, etc., to which he is accustomed. The result is either that he underestimates or overestimates the cost. In one such case, the contractor offered to sign a contract at 53 cents per cubic foot, based on sketches and a complete description of the materials and finish. Fortunately for both the contractor and the owner the proposition was not accepted, for, when this contractor submitted his figure based on complete plans and specifications, it was nearly 85 cents. The contract was let for 68 cents.

In another case, 1500 miles from the first, a careful building committee submitted complete plans and specifications to a contractor for an estimate before permitting the architects to ask for bids generally. As this contractor's estimate indicated an expenditure of over 50 per cent more than the architects estimated, he threw a bomb into the committee. The architect's estimate was \$340,000. The contractor's estimate was \$500,000. The committee was finally persuaded to ask for definite tenders on the plans and specifications just as they were. The contracts were let for \$300,000, or \$40,000 under the architect's estimate, prepared without any more accurate quantities than the cubic contents and a knowledge of the cost per cubic foot of many similar buildings. The contractor submitting the preliminary \$500,000 figure, submitted one of about \$360,000, the top of about eight or ten contractors.

The reliability of the cubic foot method of estimating, when based on voluminous, dependable, and accurately interpreted data, is rather remarkable. To use cubic foot costs of other hospitals to assist in estimating costs requires a detailed analysis of all the trades entering into the building—not merely the sum total. With such an analysis for ten or twenty

hospitals available and an intimate knowledge of them, rather close estimates can be prepared by the architect.

The geographical location of the building is an important factor in costs, and sometimes a rational explanation of differences cannot be made. Generally speaking, it costs less to build in the small town than in the large cities, less to build in the South than in the North, in the Midlands than in the East. It costs more to build in the suburbs of a large city than in the city itself. The near-by country will probably cost more than either, if transportation is not readily available. In one such case, the cost of transporting labor from the city six miles away was over \$4000 on a \$250,000 building; the additional drayage charges are unknown, but must have been equal to this, a total increase of $3\frac{1}{2}$ per cent in the cost.

Accessibility to the source of the bulkier materials is also an element of importance. A hospital in Ohio was so fortunately located that sand, lime, cement, gravel, brick, clay, tile, and most of the pipe could be trucked direct from the mill or quarry to the building. The economy in this single handling of material is obvious. The hospital that boasts of a railroad siding, either temporary or permanent, is very fortunate, if the cost of the siding does not exceed savings in drayage.

It is to be assumed that no one would consider the construction of a hospital that is not fireproof except under stress of the direst necessity, hence all references in this article are to fireproof hospitals—or a better term is fire-resistant. It would be interesting to compare the cost of various types of fire-resistant constructions. Suffice it to say that there may be a 5 to 10 per cent difference in the cost due to the method employed.

The character of the soil on the site is a factor in the costs, especially with the higher buildings. Obviously, if it is a thick bed of rock or other hard material, basements will be expensive but the foundations will be cheaper. On the other hand, if it be muck, the foundations for anything but a low building may prove to be very expensive. The topography also has an influence on the costs. Deep excavations or large fills should be avoided. The mistake so often made of planning a building without regard to the topography is expensive. Careful study by an ingenious architect will mold the building to suit the site, which almost invariably results in a better plan and a less expensive one.

The size of the building affects the cost, more especially so if it is not close to a supply of labor. The smaller the building the greater must be the effort toward uniformity and simplicity. The cost of one porcelain bath slab, about \$400, increases the cost of a 400-bed hospital just \$1 per bed, and the cubic foot cost about $1/1000$ of a cent. In a ten-bed hospital addition, however, it means \$40 per bed increase, and $8/10$ to $3/10$ of a cent increase per cubic foot. A single metal case built to suit the whims of some individual may be a considerable expense and of little more value than a stock case at one-half to one-third the price. When the unit is quite small, special efforts must be made to reduce the special features and to arrange for uniformity so that as few trades are called into play as is possible. These remarks refer rather more aptly to the 50,000 to 100,000 cubic feet additions and buildings than to larger ones, for it is difficult to demonstrate that a hospital of 5,000,000 cubic feet will cost much less per foot than one of 1,000,000.

The number of stories will have an intimate relation to costs per cubic foot. It is so true as to be axiomatic that costs per cubic foot increase with the number of stories; a one-story building costs less than a two-story building; a ten-story less than a twenty-story building. But not in direct proportion. The height of the building determines the character of the construction, whether steel or concrete skeleton, whether skeleton or wall bearing; the kind of foundations and other matters vitally affect the cost per unit of contents.

The proportions of the building are important. A "fat" building is cheaper per cubic foot than a "thin" one. Whether a "fat" plan would be cheaper per bed would then depend on whether economical use can be made of the space thus gained. A building 100 feet square contains 10,000 square feet on a floor. It has 400 linear feet of outside wall. But an area 100 feet square presents great difficulties in planning for hospital purposes. Forty feet to 45 feet are the usual widths of hospital buildings. But a building of 10,000 square feet area and only 40 feet wide is 250 feet long. It has 580 feet of outside wall, or 45 per cent more than the first building, and the number of windows (twice as expensive as wall, roughly speaking) usually runs in direct proportion to the number of feet of outside wall. Heating, too, is in almost direct proportion to the perimeter of the building. A 60-foot-deep building will then cost less per cubic foot than a 50-foot building, a 50-foot less than a 40-foot, and a 40-foot less than a 30-foot building. But the 60-foot building may be the most expensive per patient. To make this seeming paradox clear, let us assume that a 50-foot building was planned for private patients; the outside walls of each take about 3 feet, the corridor and its walls 9 feet—a total of 12 feet, leaving 38 feet for the rooms, or 19 feet each. It is generally agreed that 10 feet from center to center of partitions is the minimum for a private room. For the sake of convenience we will assume that the story height is 12 feet from floor to floor. Two rooms on each side of the corridor then will occupy a space of 50 x 10 x 12 feet, or 6000 cubic feet. A building 40 feet wide, with the same walls and corridor, and rooms on either side 14 feet deep, will occupy a space of 40 x 10 x 12 feet or 4800 cubic feet. The following tabulation of these two rooms will be interesting:

	<i>50-foot building</i>	<i>40-foot building</i>
Gross floor area	500 sq. ft.	400 sq. ft.
Cubic contents	6000 cu. ft.	4800 cu. ft.
Size of room	9 ft. 6 in. x 19 ft.	9 ft. 6 in. x 14 ft.
Sq. ft. in room	180.5	133
Corridor	8 ft. wide	8 ft. wide
Sq. ft. of outside wall	240	240
Sq. ft. of floor construction	470	370
Sq. ft. of finished floor	441	346
Sq. ft. of tile partition	609	504
Sq. ft. of plastering and painting	780	627
Door	Identical	
Plumbing	Identical	
Heating	Slightly less	
Electric	Identical	

A rough approximation of costs indicates that the two 9 ft. 6 in. x 19 ft. rooms cost about \$170 more than the two 9 ft. 6 in. x 14 ft. rooms. If we assume a cost of 75 cents per cubic foot for the 40-foot building, or \$3600 for the two rooms and corridor only, and add \$250 to arrive at the cost of the 19-foot rooms, they will total \$3850, or about 64 cents per cubic foot. These figures are not to be taken as indicative of actual costs; they merely illustrate the effect that the proportions of a building may have on cubic costs. It will be found in laying out a building 50 feet deep that many long and narrow spaces are created that are difficult to use properly and that tend to increase the costs still further. As a low cost per cubic foot is of no value *per se* if the 9 ft. 6 in. x 14 ft. rooms fill the needs at a lower cost per bed, the additional cost of 9 ft. 6 in. x 18 ft. 9 in. is a waste of capital funds and of maintenance. For obvious reasons the lower the story height, the greater the cost per cubic foot; the higher the story, the lower the cubic foot costs. Here then the determining factors will be the areas of the rooms that are under consideration.

Another factor that increases costs per bed and decreases cubic costs is the amount of unfinished space. A large unfinished basement, being relatively inexpensive, will reduce cubic foot costs. If it is not valuable for storeroom purposes it may be an unwise increase of costs per bed. Attics and pipe spaces have a similar effect.

The minuteness of the subdivision of the space within the building affects costs greatly. In our hypothetical 40-foot building, a nine-bed ward would occupy the space taken by four private rooms. There is then a gain of five beds and a decrease in partitions, painting, base, and probably outlets, as well as plumbing. The two groups would compare as follows:

	Ward unit	Private rooms
Number of beds	9	4
Gross floor area	800 sq. ft.	800 sq. ft.
Gross contents	9600 cu. ft.	9600 cu. ft.
Net area per bed	80 sq. ft.	133 sq. ft.
Net contents per bed	840 cu. ft.	1397 cu. ft.
Outside wall	480 sq. ft.	480 sq. ft.
Floor construction	740 sq. ft.	740 sq. ft.
Finished floor	740 sq. ft.	692 sq. ft.
Tile partition	388 sq. ft.	528 sq. ft.
Base	144 lin. ft.	232 lin. ft.
Painting and plastering	1880 sq. ft.	3700 sq. ft.
Doors	1	4
Plumbing	Lesser amount	
Heating	Probably alike	
Electric	Lesser amount	

Again assuming that the 40-foot private-room building will cost 75 cents per cubic foot, or \$7200 for four private rooms, it is safe to assume that the nine-bed ward in the same space would cost about \$500 less, or \$6700, or 69.8 cents per cubic foot. The nine-bed ward will cost but \$745 per bed, whereas the four private rooms cost \$1800 per bed, for this portion of the building. Presumably, however, the proportion of space set aside for accessory

services, such as toilets, elevators, stairs, scientific treatment and other departments, would be as large per bed in such cases, consequently the percentage of reduction in contents of the entire building would not be as great as this. The comparison is made merely to illustrate the costliness of minute subdivision.

The interior finish and equipment is, of course, a matter that affects costs vitally. One of the important items is flooring, about which some unbiased information is to be had and much advertising. If our mythical 40-foot building is floored with a forty-cent-per-square-foot material, the cost per unit of two rooms is \$150; if it is a \$1.60 material, the cost is \$600, an increase of \$225 per room or bed, and of about 9½ cents per cubic foot. If the \$1.60 material is used for base as well, the cost is still further increased.

Wainscotings of various kinds are desirable in many places. Their effect on costs may again be illustrated by our hypothetical rooms. Making allowances for openings, a seven-foot wainscot would contain about 290 square feet. Plastering and three coats of paint would not cost over 16½ cents per square foot in Chicago today, a total of \$47.85. A relatively inexpensive wainscoting material would cost just ten times as much, or \$478.50 per room. There are places where such increased expenditures are justifiable—and these are not always the operating rooms—but the architect and the building committee must keep a careful watch on these items.

Plumbing fixtures play an important part in costs. Figures to illustrate this fact are dangerous for they are so readily misinterpreted. If each patient's room is to have a lavatory, the cost per room is \$75 to \$100. If a water closet is added, an additional \$125 disappears. If a bath tub is added, \$125 more expense is added. The complete plumbing installation for a bathroom cannot be estimated at less than from \$325 to \$400, depending on the number of fixtures to each plumbing stack, the quality and size of the fixtures, and the accessories. The space occupied by this complete bathroom will cost not less than \$450, making a total expenditure of not less than \$800 for each bathroom installed. Each toilet represents approximately \$400 to \$450. If the bath is changed to a shower and a proportionately smaller building area used, the cost is less.

Little need be said about economies in ventilation. So much has been said and written to deride the elaborate ventilation equipment of thirty years ago that the pendulum has swung to the other extreme and generally too little is installed. Certainly, the minimum is a positive exhaust fan from the kitchen to insure that odors of food do not reach the patients' floors. The costs are usually rather trifling, even in complete installations, running from ½ to 1 per cent of the cost of the building.¹

Heating costs vary, of course, with the location, being at the minimum in the far south. The older types of heating are steam and hot water. Hot water was formerly considerably more expensive than steam but improvements have resulted in reducing the cost of hot water until it approximates that of steam. Modern hot air heating has received a great deal of attention in recent years and is sometimes called "air conditioning." It is usually more

¹ Since writing this in 1928 the pendulum has again swung back and this ventilation is now called "Air Conditioning"; as air conditioning in any of its variations is added to the hospital the cost may be very considerably increased.—C. Erikson

costly than steam or hot water. In recent years the convector has taken the place of a lot of radiators and usually, too, was accompanied by increased cost unless the hospital planned to place covers over the radiators in which case the convector probably cost less.

Electrical outlets cost little and they are often a great convenience. The climax was probably reached in a hospital where twenty-eight outlets were required for each private room. Electrical contractors figure anywhere from \$7 to \$12 per outlet in rough estimating purposes. The cost of multiplying small items such as this is rather astonishing. Sales talk and advertising have resulted in the installation of many interesting devices, electrically operated.

Elevators are more often purchased because of sales talk than because a dispassionate analysis has been made of the relative merits of the different types. An elevator for a five-story building can be purchased for \$5000. An elevator with more "frills" and greater maintenance costs and greater serviceability may cost as high as \$15,000.

The rapid development of the unit type refrigeration and its relatively low cost because of large-scale production may make these a genuine economy over a central refrigerating plant; in the small hospital they unquestionably are a real economy.

There are many interesting and valuable devices for use in the boiler room. Some of these are applicable only to larger installations. Stokers, for instance, are often installed under boilers in the expectation that they will save labor. In small installations this is not the case. Their cost, \$500 and upwards for boilers, can usually be justified due to their more efficient firing and consequent fuel saving. Oil burning has proven itself to be very desirable and in some cases reduces operating costs. However, the oil burning equipment probably costs as much as if not more than stokers for the same size boilers.

Multiplicity of sterilizing equipment must be avoided if costs are to be kept down. Not only is the equipment expensive, but the cost for steam and plumbing lines is often large.

At this point it seems opportune to relate the hospital operating budget to the building program and its costs. Inferior or poorly chosen materials are inevitably reflected in operating costs, perhaps not the first year or the second, but in the fifth, sixth, or twelfth year.

Wall painting materials may be had at widely ranging figures, both in the cost of the material and in its application. A ten by sixteen-foot room will contain about 600 square feet. It may be painted under contract at a cost anywhere from \$20 to \$35. The same number of washings will be required in any case, but at the lower figure the work will not last over two years and at the higher figure it will last four years or more. At the end of two years, the expenditures for the inferior material would have been \$47 and \$35 for the better material, with two years yet to go. In piping, electrical materials, floors, wall materials, and innumerable places in the building, similar examples may be given.

Initial cost	\$20.00	\$35.00
Repainting at end of two years	12.00	
Three days' loss of room while painting and drying, at \$5 per day	15.00	
	<hr/>	<hr/>
	\$47.00	\$35.00

Here it is interesting to point out the results of a well-known character trait—the desire to purchase for little money. It is a well-nigh irresistible temptation for some building committees to report back to their boards that they have let contracts for less than the lowest figures received when bids were opened, by eliminating “nonessentials” that the architect thought were necessary. Some years ago, a building committee decided they would save \$600 on a \$350,000 project by eliminating the caulking specified around window frames. The chairman was an experienced builder and assured the committee that he had not found it necessary in any of the many office buildings and apartment houses he had constructed. The first two winters, the management complained that the rooms exposed to the severe west winds were cold at times, when all other parts of the house were comfortable. The third winter, during an exceptionally cold spell accompanied by a westerly gale, all the patients had to be removed from this side of the building, and about four to six main plumbing lines froze. The cost of repairing and thawing the plumbing lines is not known for it was done by the hospital’s own maintenance men. The loss of revenue has never been calculated, but was considerable. The architects received instructions to proceed immediately to let contracts for the caulking. In the seven years that have followed there has not been a day that the rooms on the west side have not been comfortable, and there have been no frozen pipes. A comparative tabulation follows:

Original saving	\$ 600.00	
Heat losses during two and a half winters		unestimated
Repair of frozen pipes	100.00	(estimated)
Loss of revenue	250.00	(estimated)
Caulking	1,200.00	
<hr/>		
Cost when finally installed	\$1,550.00	

There probably was never an article published or a paper read on hospital costs that did not decry expenditures of the hospital funds for exterior adornment—sometimes sneeringly called “monuments to the architect.” (Wouldn’t mausoleums be a better term?) The architect usually has a keen sense of his community responsibilities, and he would be the last willingly to betray that responsibility. These so-called “monuments” are more often a reflection of the desires of the directors, either unconsciously by selecting an architect who does the grandiose thing, or consciously by directing him to do so. But this constant iteration has had its effect on hospital appearance. The change from the grandiose hospital monuments of twenty-five years ago to the simpler buildings of today was effected by the architects themselves in leading the public to an appreciation of simpler, better, and more human architecture.

One need only compare the typical over-ornate bank of twenty-five years ago with the simple, severe structure of today. And it does not follow that the simple bank of today is any less expensive than the over-ornate one of the beginning of the century. Then scagliola was used; today it must be marble. Nondescript ornaments are now replaced by a few bits

of carving and sculpture, done by a skillful sculptor, costing two or three times more than the ornaments of the earlier period. And that is as it should be, quality and not quantity. On the exterior of the hospital, the materials should be of the best, the most enduring. Some leeway must be given the architect, for even our efficiency hounds, the factory managers, admit that comeliness in their factories is not to be overlooked. How successful the architect will be depends entirely on his ability and his perseverance, for an attractive building is the result of hard labor.

The choice of material for the exterior will depend somewhat on the location. Our excellent transportation facilities have taken much of the local color out of American architecture. Bedford stone has almost supplanted every local stone, no matter how excellent. Ease of transportation, plus the economies of large-scale operation and its natural qualities, has made it the premier building stone. The national advertising campaign, too, has had its effect in chasing out the local stones.

Because of cost, stone is generally eliminated from consideration except as a trimming material. Generally the only choices remaining are brick or stucco. Until a few years ago, stucco would not have been given serious consideration for any important building. Thanks to California, Florida, and the advertising of the cement manufacturers, this material meets less resistance than formerly. Stucco is a time-tested material found in practically every European country from Sweden to Italy. The Children's Hospital, Florence, Italy, upon which we find Andrea della Robbia's famous bambini, is of stucco trimmed with stone.

Brick of every color, from white to black and at prices to suit every purse, is available. Stone, terra cotta, or artificial stone or marble may be used for embellishment or for practical purposes. The effect desired by the architect, if he is an artist, will generally be the determining factor, coupled, of course, by a consideration of the funds available.

There are about as many different kinds of hospitals as there are people who build them. There is the difference between the city or state-operated institution and the privately owned and operated one. The city, state, or federal hospital probably costs more to build than the same institution if built by a private enterprise. The reason for this is difficult to explain.

The simpler the hospital, the less its cost, of course. The rapid-turnover hospital (acute disease, general, or maternity) will cost more per bed than a slow-turnover hospital (an orthopedic or tuberculosis); if the hospital is chiefly used to give custodial care, the building will cost less.

The time to buy is when others wish to sell. When that may be is rather uncertain, but, broadly speaking, in the North it is in the spring that our thoughts turn to building. The contractors and material dealers are besieged for figures. They figure accordingly. Another spurt, though not so marked, is to be noticed in the fall, when buildings are started to be ready for spring renting. Much of this is due to the popular impression that winter building is impractical and expensive. There are many contractors who take the position that it is less expensive to do winter building because of the greater efficiency of labor. That it is

practical is evidenced daily in the thousands of buildings erected in the North every winter. If there is any one time of the year that may be considered better than another to start, it is perhaps just before the spring rush. It is true that in the northern states this may mean some excavation of frozen soil, but it also means that, with good luck, the contractor will be one or two months ahead of the rest of the crowd and should obtain better prices and better labor.

The housing of personnel varies so much that it would only further complicate this discussion to more than mention it. The house staff is generally housed within the hospital buildings. The number of this staff will, of course, affect the costs per patient's bed. In Catholic hospitals the Sisters are often quartered in the main hospital structure, although, if it is a large hospital, a separate wing is usually provided. These quarters are usually simpler in finish, accessories, and equipment than the patients' rooms. They increase the cost per patient's bed materially. The simpler finish and detail tend to reduce the cost per cubic foot of the entire structure.

The cost of housing the nurses is influenced by many of the same things that affect hospitals. The cubic contents per bed may vary from 2500 to 7500 cubic feet. The cost per cubic foot at Chicago prices is from 35 cents for ordinary construction to 75 cents for a high fireproof building with all the "trimmings." As the number of nurses to be cared for depends on a multitude of factors, such as the kind of hospital, character of service, and the presence or absence of a training school, the equation of costs consists of a series of unknowns, and to arrive at an answer these unknowns must be determined.

Each year sees increased costs of all kinds of building. New and better materials are introduced, but usually at an increased cost. The fireplace was an improvement over the fire in the middle of the room, the stove over the fireplace, the furnace over the stove, steam over hot air, and hot water over steam. With each change, costs increased. Yearly there is an increasing importance attached to quality building; more and more it is found that cheapness is often expensive. This applies to all types of buildings, but nowhere more than to the hospital. Comparison of the detail, accessories, and finish of the best hospitals of twenty-five years ago with the best of today is startling in its revelations.

4. Twin Problems in Construction; Insulation and Acoustics, by *James Govan, G. R. Anderson, and H. E. Reilley**

I. INSULATION

NORWITHSTANDING the rapidly growing realization of the benefits to be derived from the use of insulation in building construction, a study of the descriptions of a great many of our comparatively recent hospital developments indicates that the importance of the subject is either only partially realized or is blandly ignored.

* Adapted from *Mod. Hosp.* 42:52-56, Mar. 1934. Significant savings and increased comfort are the promises held out to hospitals by this Canadian study. These two reports are findings of a subcommittee of the general committee on construction and equipment of the Canadian Hospital Council.—Editors.

Three important facts must be studied together, if a proper understanding of the function of insulation is to be had. The first point is that in latitudes in which there are wide fluctuations in outdoor temperature throughout the year, one may find that solutions that are economically satisfactory in other climates become totally unsuited. The second point is that these fluctuations in outdoor temperature not only affect standards of human comfort but also exert a decided influence on the scientific principles of building construction. The third factor in the situation is that while those who live in northern latitudes suffer from wide fluctuations in outdoor temperature, they also enjoy remarkably satisfactory average outdoor temperatures during winter months as well as in summer. Rarely does one see any evidence that the significance of these satisfactory average temperature conditions in relation to building construction methods has been clearly understood or taken advantage of by hospital builders. To those who have not given this matter thought, we suggest that a careful study be made of local records over a period of several years.

For hospital builders, the importance of these conditions will be realized when they understand that it is quite practical to construct buildings that will maintain indoor temperatures not much lower than the winter outdoor mean or much higher than the summer outdoor mean, without the assistance of artificial heating or cooling. The only factor that will affect these results is the amount of air admitted to such buildings in extremely cold or hot weather. We can emphatically assert that, under average conditions of human occupancy, absolutely satisfactory indoor temperatures can be maintained at all times with less than one-half the size of artificial plants usually installed in buildings not designed to take advantage of temperate average outdoor conditions. Experience in occupied buildings in Ontario, in which the heating plant installed is reduced by 70 per cent from what would be considered necessary for the same buildings with ordinary construction, backs up the foregoing assertion.

With regard to summer comfort, it is essential that the orientation of each building for sunlight be studied so that full advantage be taken of the warmest aspects in winter and the coolest in summer. In such a specially insulated structure, the torrid rays of the summer sun must be prevented from entering directly through windows, because, if once the indoor temperature is raised by such direct radiated heat from the sun, the very nature of the construction will make it more difficult to lower the temperature when the sun has set. Special attention must, therefore, be given to windows which have an east, southeast, southwest, or west exposure.

The results described cannot be obtained in any haphazard fashion, by using ordinary construction methods with thin linings of this or that. Unfortunately, no report of reasonable length could give enough detail fully to meet the different conditions that arise with each project. Emphasis must be placed on the absolute necessity for the provisions of adequate resistance to heat flow in all parts of a building structure, and this must be combined with a capacity to retain heat within the structural materials. We do not agree, however, with some authorities, who claim that heat capacity cannot be obtained in light materials, and we suggest that further scientific investigation of this matter is urgently needed.

Adequate resistance to heat flow in the walls and roof of a building will only partly solve the hospital problem if we continue to use windows that are about as effective as sieves in stopping heat from passing directly through the glazed parts and admit cold air around the junctions of the sash with the frames and around the frames where they come in contact with the walls. Good weatherstripping and caulking will get rid of the latter objectionable features of ordinary construction, but a solution for the heat transmission loss through glass has been hard to find. Many schemes have been tried, but in most cases the results have been unsatisfactory, because of the cumbersome nature of the construction, condensation between double and triple glazing, and dirt collecting on inaccessible surfaces. Recent developments, however, indicate that it will now be possible to reduce the amount of heat transmission by about 75 per cent with a thoroughly practical window and still keep costs at a reasonable level.

The disadvantages of metal for window frame and sash construction for a building, such as we have indicated, need scarcely be pointed out, and we seriously doubt whether the added fire safety claimed for metal in window construction is sufficient to offset its other serious disadvantages under the atmospheric conditions that should prevail in a modern hospital. The development of fireproof wood or some synthetic composition with similar low heat-conducting qualities would seem to offer a more practical solution of the fire hazard problem. Failing that, metal will have to be treated in some way to make it comply with the newer requirements of hospital administration described later.

Some idea of the fuel savings made possible by the type of construction we have referred to may be obtained from a comparison of two typical hospitals, No. 1 in Ontario where the construction methods used followed the lines indicated above, and No. 2 in Quebec with ordinary construction. The ratio of occupants and staff in the Ontario and Quebec buildings is approximately 1 to 3, and the services and accommodation provided in the Ontario building are, if anything, more elaborate than in Quebec, in proportion to the number of patients accommodated. The two institutions are in districts where the climatic conditions are similar, and there is nothing radically different about them except the building construction and the mechanical and heating equipment. Sterilizing and other provisions affecting comparison are just as complete in No. 1 as in No. 2. Both winter and summer comfort conditions for patients are better in No. 1 than in No. 2, and the capital cost per patient was at least 30 per cent lower in No. 1. Hospital No. 2 is not an abnormal example

COMPARISON OF FUEL COST IN TWO CANADIAN HOSPITALS

	Ontario Hospital No. 1	Quebec Hospital No. 2
Cubic space heated	160,000	461,000
Coal consumption per year, tons	60 (heating) 14 (dom. wtr.)	800
Electric light and power cost per year	\$785.65	\$3516.00
Gas cost per year for cooking	None	\$900.00

of such institutions. In fact, it may be said to be typical in both first and maintenance costs of the average institution of this kind built all over Canada and the northern section of the United States. The cost per 1000 cubic feet for heat, light, and power compares closely with several other typical institutions studied.

That the benefits to be derived in a hospital so constructed would not be limited simply to reductions in fuel cost, as has been so often taken for granted, is well set forth in the following views expressed by Dr. C. A. Mills, department of internal medicine, Cincinnati General Hospital. Doctor Mills writes as follows:

Since new developments in hospital construction engineering render it feasible to provide proper air conditioning at low cost, it is necessary that the medical profession indicate the need for this service and the use to which it may be put. Deserving of first mention is its use for both premature and full-term infants of delicate constitution. Even infants of normal health should have a well-regulated environment. Next come the children suffering from summer diarrhea. Here relief from the heat, which seems to be a major factor in causing the disturbance, is of the utmost therapeutic importance. It would be of like importance to relieve heat stroke and heart failure cases from the depressive effects of hot summer weather. For these individuals, the direct application of cold to the body, as with cold packs, is not nearly so much to be desired as that they have cold air to breathe. They should be provided with a room in which frequent and fairly wide fluctuations of temperature could be secured at will.

Surgeons avoid as many serious operations during the summer heat waves as they can, because experience has shown that post-operative risks are unduly high. The writer believes every surgical ward should be equipped to avoid temperature extremes and to provide a 10–12° F. day and night variation. The temperature variability should be kept low for the first two or three days after operation, but should then be rapidly increased to provide maximum stimulation and shorten convalescence. This would hold as well for medical, obstetric, and other types of patients as for those in the surgical wards.

Air conditioning also should include the furnishing of certain rooms in each hospital with a high, even temperature and high humidity for the treatment of those conditions of overstimulation, such as exophthalmic goiter or hyperthyroidism, severe cases of diabetes and pernicious anemia, essential hypertension, and many hyper-irritable or excitable nervous states. A week or two at a temperature of 85° F. and a relative humidity of 70 per cent produces quite a noticeable reduction in the rate of body metabolism.

In general, we have found experimentally that the body is best stimulated by fairly wide daily fluctuations of the temperature, and is most depressed by a constantly high temperature and high humidity. Since most of the patients' time in the hospital is spent recuperating, we should be able to provide the optimal environment for hastening this recovery. Either stimulation or depression should be applied as necessary.

In hospital buildings of ordinary construction, the provision of air conditioning methods as outlined by Doctor Mills is almost out of the question at anything like a rea-

sonable cost, but when construction methods can be used that will allow a cut of 70 per cent in the size of the heating plant, the resultant economy increases the possibility of giving the medical administrators of hospitals almost any variation in air conditions they want. Furthermore, it will avail us little if we change the air temperature in a room up or down unless we can control the temperature of the inside surface of the exposed walls, ceilings, and glass. Under ordinary construction methods, these temperatures fluctuate within a wide range and thus the amount of heat radiated from the human body is seriously affected. In buildings of the desired type, the temperature of these exposed surfaces is brought much nearer to the level of the air in the room, and therefore the temperature of the air breathed can be varied over a wider range and comfortable conditions still be maintained. This feature and the ease of maintaining even higher air temperatures inside with a much reduced amount of heating apparatus make it possible to resort to individual room control of air conditioning at a cost much lower than has hitherto been found necessary.

With so many insulating materials now on the market, which are not only highly fire resistant in themselves but also, in some cases, add to the fire resistance of other more inflammable structural materials, there seems to be absolutely no reason for hospital authorities to add to their fire hazard by choosing materials that are either quickly destroyed by fire or aggravate the danger from smoke and gas.

The greatest care must be taken in the use of insulation to see that the known laws of physics are observed. Cold storage practice has demonstrated, for example, that air spaces in wall and roof construction are certain to cause trouble through condensation and freezing. The same rules apply to other buildings in which the general methods of preventing heat transmission are followed.

This report would be incomplete if attention were not drawn to the inexcusable loss of heat so often observed in connection with the installation of boilers, tanks, and pipes. While it is true that in many cases such equipment is so placed that the heat is allowed to pass into portions of the building that may sometimes require heating to maintain comfortable conditions, it is nevertheless true that in far too many cases the heat generated is wasted and only adds to the discomfort of occupants in adjacent parts of the building. The efficiency of the covering used is, generally speaking, not nearly sufficient, and we can state definitely that its potency can be materially increased in most instances without adding to the building cost.

In case this report might be interpreted as advocating methods of construction much more costly than the ordinary hospital can afford, proof can be produced that the methods of building recommended have been followed in hospitals that rank as the lowest in cost per bed for the facilities provided for the care of patients and staff. Not only is there no excuse for increasing the capital cost, but when the lowered maintenance costs per annum are taken into consideration, it can be shown that to follow ordinary methods of construction in the building of hospitals is a sheer waste of public and private funds that would not be tolerated if all the facts were clearly understood.

II. ACOUSTICS

So far as hospitals are concerned, the principal task in acoustics is to prevent the creation of distressing noises that would scarcely be tolerated in buildings occupied by individuals in good health, and to reduce to a minimum necessary existing sounds. The problem is a relatively simple one in this case. In lecture rooms for nurses and other staff members, in clinic demonstration rooms, corridors, maternity rooms, and children's wards, the installation of acoustical material is desirable for the purpose of lessening unavoidable noise disturbances. To this end, hospital committees should exercise great care in the selection of the site for the building. How often one sees a hospital erected in the noisiest section of the city where traffic is heaviest. Cases exist in which the hospital is near a railroad at a point where the ringing of the engine's bell and the loud blast of the whistle at all hours of the day or night are necessary. One would hazard the assertion that half the acoustic troubles in a hospital could be eliminated by the wise selection of the site.

The idea of mystery about the subject of acoustics has a tendency to keep up the cost of treating hospitals to reduce the noise nuisance, and the sooner this idea can be dispelled the greater will be the demand for satisfactory sound-absorbing materials.

We need not wonder that many hospital administrators fight shy of recommending to their boards expenditures for acoustic treatment when we check up the poor results that have been obtained in far too many cases, as compared with the extravagant claims made prior to installation by the manufacturers of the materials used. When jobs are checked up by scientific tests and it is found that materials for which about 50 per cent absorption is claimed are giving about 15 per cent, and in other cases claimed results of about 40 per cent dwindle to between 20 and 27 per cent in actual execution, a distrust in published data is created from which all manufacturers are suffering. This feeling is further aggravated when certain salesmen leave samples in architects' and engineers' offices that would meet hospital requirements, but which are totally different from the materials actually installed on jobs, the latter being far from satisfactory so far as hospital requirements are concerned. Recent experiences of this kind compel us to urge all hospital authorities to be candidly skeptical in comparing the claims made for different materials, even when such claims are based on reports of tests conducted at well-known laboratories. We do not suggest that the authors of such reports are deliberately misleading their clients, but we do assert that the results obtained on many jobs do not support the laboratory-test results published.

Another reason for caution in the selection of materials is that so many manufacturing firms have entered this field that new materials with obvious advantages are becoming increasingly available; therefore the widest possible range should be studied before decisions are made. The cost of expert guidance in selection will, in most cases, be more than offset by the difference in cost of the final installation and the results obtained.

Up to the present the high cost of absorbing materials and the high absorption claims made for some materials have resulted in the common acceptance of the idea that, if the ceilings of corridors and a few rooms, such as rotundas, waiting, dining, lecture, and simi-

lar rooms, are treated with absorption material, the results will be as good as can be expected within the limits of the appropriation available. Contrasted with this theory of hospital noise abatement, the results obtained in a few hospitals using an alternative method are well worth studying.

Examination of a number of hospitals using the first method indicates that the average total area treated is in extent about 14 per cent of the total floor area of the hospital whereas in a recently constructed example in Canada of the second method, the total area treated is practically equal to 100 per cent of the floor area of the building. Under the first method, the general practice is to limit the cost of the treatment to from 1½ to 2½ per cent of the cost of the building, but the interesting point about the example of the second system just mentioned is that the cost was a little under 2 per cent of the building cost.

In one instance of this second group, the total amount of absorption provided was a little over 13,000 units, and the cost installed was about \$5000. To get an equal amount of absorption in still more efficient materials, the area treated would have been reduced to about the provisions indicated for the first method referred to and the cost would have been twice as much.

The total results in quieting the hospital generally would not have been as good because there is no more justification for allowing noises to be created all over a hospital and letting them pass into the main corridors off patients' rooms, there to be absorbed at the ceiling, than there would be for discharging annoying effluents from plumbing fixtures into an open pipe in the same corridors before disposing of them into a sewer pipe. Noise is just as baneful in its effects as odors or bacteria and should be stopped at its source wherever possible.

In the effort to provide hard, shiny, glasslike surfaces all over the interior of hospitals, more harm than good has resulted. The type of building so developed within the last two generations is entirely lacking in restfulness and comfort. It does not follow that because a surface is rough in texture it must of necessity provide a good medium for the development of bacteria. Exhaustive bacteriologic tests have definitely proved that some rough acoustic materials are no more objectionable on this score than the glossiest enamel finish. Experience has proved also that such surfaces are quite easily cleaned and thus, the bogey of bacteria and dirt being killed, what excuse remains for having hospitals echo and re-echo with every sound?

With the number of satisfactory noninflammable and nonsmouldering materials now available, there is no justification on price, efficiency, or any other grounds for the selection of materials that would add to the fire risk or create discomfort and confusion in the event of fire developing in the building.

While considerable progress has been made in the development of materials to absorb noise, the same cannot be said about developments to prevent the making of noise. The use of metal furniture and utensils, metal doors, noisy elevator and dumb-waiter equipment, plumbing fixtures, pipes, pumps, sterilizing racks, metal trays, and hundreds of other things that clack, bang, hum, and squeak has created a situation in most hospitals

that calls for drastic remedies. When we say drastic remedies, we do not necessarily mean expensive, but what seems to be needed is the reading of the riot act to architects, engineers, manufacturers, and others who can do a great deal to prevent these disturbances without adding anything to the cost of hospital buildings. Metal-to-metal contacts, pumps out of line, nonenclosed machinery, water-hammer and other pressure noises in piping, and scores of other distracting causes of disturbance are all unnecessary and could be removed by serious application to the problem.

The stopping of sound transmission from labor rooms, nursery, and other noisy departments presents difficult problems. In general, construction methods using heavy materials that provide ample rigidity in floors and walls will give best results, but frequently local conditions make it impossible to adopt them. In such cases light materials can be used, but the principles governing sound transmission must be thoroughly understood if satisfaction is to be obtained. In this matter also the data frequently presented by manufacturers are misleading, as evidenced by the number of poor installations that can be cited. Even when the walls and floors are properly built, unsuitable doors, windows, and other openings will entirely negate the benefits that might have been obtained. Experience at several hospitals has proved that departments of this kind can be treated scientifically and inexpensively so that they do not cause any annoyance to occupants of adjacent rooms; but each case has to be studied individually and therefore it is impossible to give construction details and specifications in a general report of this scope.

Hospital administrators are to be congratulated on getting rid of dirt, impure food, water, cross infections from bad technique, and many other menaces to the well-being of their patients and staff. Why not go a stage further in a campaign to eliminate the equally harmful effects of noise disturbance? A frank recognition of the fact that far too many of our hospitals are a disgrace in this respect would help materially in making everybody that contributes to the erection and equipping of a hospital realize that they have a distinct duty to perform to see that everything they design, make, supply, or install shall be as quiet in function as it is possible to make it.

5. Advantages and Limitations of Hospital Air Conditioning, *by C. P. Yaglou**

HOSPITAL air conditioning differs considerably from routine applications to commercial and public buildings. Each ward presents different problems; requirements may vary according to individual preferences of physicians. Although complete air conditioning of large hospitals is impractical at the present stage of the art, it is desirable, and often necessary, to provide certain wards with essential equipment for specific needs. An idea of the relative importance of air conditioning to various wards can be obtained by referring to the partial list of installations in the accompanying table.

Artificial humidification and ventilation of operating rooms, in conjunction with proper grounding of equipment and personnel, have contributed much in reducing anesthesia ex-

* Adapted from *Mod. Hosp.* 53:50-51, July 1939.

INCOMPLETE STATISTICS OF HOSPITAL AIR CONDITIONING IN UNITED STATES
(Including Winter or Summer Air Conditioning or Both)

<i>Conditioned room or ward</i>	<i>Number of hospitals</i>	<i>Number of rooms</i>
Completely conditioned hospital buildings	12	375±
Operating and postoperative rooms	73	179
Private rooms or wards	29	249
Labor and delivery rooms	27	54
Nurseries for premature infants	25	38
Nurseries for full-term infants	19	79
Experimental rooms and laboratories	16	50
Anesthesia rooms	13	18
Allergy rooms	9	10
X-ray and physical therapy rooms	8	9
Oxygen chambers	7	9
Isolation wards	3	3
Miscellaneous (offices, examination rooms, nurses' rooms, dining rooms, etc.)	12	190

plosions by static sparks but cannot and have not materially affected risks from numerous other causes. Even the heat of a surgical lamp may ignite ether-oxygen mixtures, which have the lowest ignition temperature of the common anesthetic mixtures.¹

Explosions in the last few years have resulted chiefly from the use of electrocautery or surgical diathermy, but the danger of such explosions is believed to be small compared with the benefit attained from reduced postoperative complications. The use of such electrosurgical apparatus precludes grounding, and sometimes artificial humidification also, because of the danger of electrocuting a grounded patient. Until a good anesthetic is found that is not explosive, the danger will remain, especially in operations requiring the use of sparking equipment on parts of the body near the throat.

Cooling of operating rooms during summer heat waves has improved the comfort and the energy of the operating staff and is believed to have contributed much to the welfare of the patient directly or indirectly. There is much good evidence to show that heat stroke and heat exhaustion in hot weather are common postoperative occurrences sometimes overlooked and treated as shock. There are not enough clinical data to evaluate the effects of air conditioning on surgical patients. Reports from surgeons are uniformly favorable and give no support to fears of ill effects on patients from operating room temperatures from 10 to 15 degrees lower than outside temperatures in warm weather or to the anticipated increase of wound infections from increased circulation of air. On the other hand, there appears to be a slight but definite increase of colds among nurses from frequent exposure to sudden temperature changes. This experience is confirmed by nurses attending premature infants in warm and humid rooms during the cold season of the year.

¹ G. W. Jones, *Explosion and Fire Hazards of Combustible Anesthetics*, Rep. of Investig. No. 3443, U. S. Bureau of Mines, Apr. 1939.

A wide difference of opinion exists as to the most suitable operating room conditions. The surgical staff likes to work best in temperatures between 70° and 78° F., but, for the sake of the patient, the temperature is often increased to 80° F. The relative humidity is usually kept at between 50 and 60 per cent in order to prevent accumulation of static charges. Some recent studies² seem to indicate that the patient loses little heat under modern operating conditions and that the room temperature should be low, rather than high, in many instances. There is great need for a thorough study of this important matter.

Although cooling of recovery rooms is held to be at least as important as cooling of operating rooms, statistics show only one cooled recovery room for every seven operating rooms. In many instances, private rooms that are cooled are used as recovery rooms in warm weather without being classified as such.

Sterilization of air of operating rooms is still in the experimental stage, although it is being used with apparent success in a few hospitals. The old-fashioned gauze mask gives a false security in an otherwise aseptic technique. The problem continues to be the prevention of air contamination rather than the sterilization of contaminated air.

The necessity of maintaining an even and relatively high air temperature in the care of premature infants accounts for the wide use of individual incubators. Recent studies at the Boston Infants Hospital³ show how important humidity, ventilation, and cooling in hot weather can be in saving lives. A continuously high humidity of about 65 per cent proved to be the most desirable, especially for infants weighing less than three pounds. No appreciable benefit resulted to infants weighing more than four pounds, except in special cases. In nurseries for normal infants, there seems to be little need for year-round air conditioning, although some provision should be made for ventilation and cooling excessively warm rooms.

In maternity hospitals that are not completely cooled, there is danger in lowering the nursery temperature much below the prevailing ward temperature, owing to sudden temperature contrasts in moving infants from the nursery to their mothers.

From the standpoint of comfort, excellent results are reported in the cooling of labor and delivery rooms, particularly from the warmer sections of the continent. Some hospitals in the North provide for humidification of delivery rooms in cold weather, although the danger from anesthesia explosions is more remote in these rooms.

The chief value of air conditioning in fever therapy lies in its ability to prevent loss of body heat by radiation, convection, and evaporation through the medium of nearly saturated air at a temperature that is but a few degrees above that of the body. If heat loss is not prevented, an extra strain is imposed on the patient because of the extra heat that must be applied to the body to counteract the loss. This may be an important factor in dehydration and shock in patients undergoing fever therapy.

It has long been known that although hot, dry air may have the same effect on rectal

² F. W. G. Smith, Investigations in the relationship of heat regulations to late ether convulsions and syndromes, *Anesth. & Analg.* 17:169, 1938.

³ K. D. Blackfan, C. P. Yaglou, and K. McKenzie, The premature infant: a study of the effects of atmospheric conditions on growth and on development, *Am. J. Dis. Child.* 46:1175, 1933.

temperature as saturated air at some considerably lower temperature, the loss of fluid and chloride under the former condition would be greater. According to recent studies by Gibson, Kopp, and Pijoan,⁴ not only dehydration but the degree of alkalosis are more nearly at a minimum when fever (160° F.) is induced with warm saturated air (106° to 112° F. with 95 to 100 per cent relative humidity) than when it is induced with hot, dry air (140° F., 40 to 50 per cent relative humidity), despite the liberal administration of fluids. Treatment was uneventful under the former condition, whereas shock occurred under the latter. In an excellent evaluation of relative advantages and disadvantages of various methods for producing systemic fever, Neymann⁵ arrives at the conclusion that the method of choice is a combination of electromagnetic induction and air conditioning, the former for raising the body temperature to the desired level and the latter for maintaining the fever by preventing heat loss.

Nearly fifty diseases have been treated with fever produced by various physical means. Definitely favorable results have been reported in gonorrhea, neurosyphilis, chorea, asthma, peripheral vascular diseases, and others. Diseases the organisms of which cannot be killed by heat within the safe limit of human tolerance have benefited by vasodilatation and increased immunologic response.

Hay fever and pollen asthma offer a wide field of application of air conditioning in hospitals, offices, or homes. Although removal of air-borne pollens is the chief factor in the relief of allergic symptoms, comfortable temperature and humidity are definitely beneficial. Extremes of heat or cold, humidity, or drafts must be avoided because they are likely to initiate or aggravate symptoms. Unlike medical desensitization, treatment by conditioned air is not curative but gives relief in extrinsic forms of allergy only so long as patients remain in a pollen-free atmosphere. The symptoms return on exposure to pollen-laden air. Intrinsic forms of allergy and bacterial asthma are not appreciably benefited and may even be adversely affected by overcooling the air. To a hospital or clinic, a properly conditioned room offers a valuable aid in the diagnosis and treatment of complex cases, since failure to obtain relief in such a room excludes extrinsic causes.

In oxygen therapy, the use of air conditioning is now almost entirely confined to cooling and dehydration of oxygen tents by means of ice. Excessive CO₂ is adsorbed by soda lime. Aside from experimental purposes, oxygen chambers of massive metal construction have proved impractical, owing to high initial and operating costs.

In x-ray and physical therapy rooms, ventilation and cooling are desirable to remove excessive heat and ozone for the comfort of patients and doctors. Large storerooms for x-ray plates and films also require conditioning to prevent deterioration of pictures and new films.

Surprising as it may seem, isolation wards are rarely air conditioned and only a few have any formal system of mechanical ventilation, probably because of fear of spreading infection from one room to another.

⁴ M. Pijoan, Certain biologic effects during artificial fever, *Arch. Phys. Ther.* 20:170, 1939.

⁵ C. A. Neymann, *Artificial Fever Therapy*, Baltimore and Springfield, Ill., Charles C. Thomas.

Studies in air conditioning as an adjunct to the treatment of respiratory infections, arthritis, cardiovascular disorders, summer diarrheas, fevers, vertigo, and a few other diseases have been in progress for some time in certain hospitals and medical research institutions. Although the field appears to be broad, it is yet too new to permit a critical evaluation of results.

6. Plumbing the Situation, by *W. Scott Johnson**

FOLLOWING the invaluable pioneer studies and investigations of the Chicago Health Department concerning the actual and potential health hazards due to faulty plumbing, public health officials throughout the country were confronted with a situation that could not be ignored. Hotels, milk pasteurization plants, manufacturing plants, and hospitals, housing many people and having complicated plumbing systems, presented many potential health dangers. The situation demanded extensive study of water and sewage systems in order to locate possible defects.

The particular problem of faulty plumbing and equipment as related to hospitals is complex. In addition to the usual sewers, water supply lines, bathroom fixtures, wash basins, storage tanks, refrigerators, and condensers found in most buildings, the hospital has many types of special equipment to which both water supply and sewage lines are connected. These include instrument sterilizers, autoclaves, water sterilizers, bedpan sterilizers and hoppers, autopsy sinks and tables, and aspirators.

It is necessary that in a hospital unusually large quantities of highly infectious material be disposed of into fixtures that drain into the sewer lines of the building. Such types of equipment as water and instrument sterilizers become essentially a part of the plumbing system since they are connected with both the water and sewer lines, and upon their satisfactory operation depends the asepsis essential to many hospital activities.

To recognize the faulty plumbing conditions that may result in contamination of a hospital water supply, sterilizers, sterile bandages, or water, a few fundamental hydraulic phenomena concerning water and sewer lines must be clearly understood.

It has been customary to drain such hospital equipment as instrument sterilizers, autoclaves, and sterile water containers by solid pipe connections into the house sewer lines. It must be definitely understood that all valves on water lines or sewage lines, either check or manual, will sooner or later, because of corrosion, wear, defect or carelessness, leak and fail to be liquid-tight even under light pressure. Sewer lines frequently become clogged due to the size and nature of material discharged into them. It is not infrequent to find sewer lines too small to carry large quantities of waste material freely. In either case the result is back pressure in the sewers which places all outlets from fixtures under a positive pressure. These outlets may be protected by a manual or check valve, but these are liable to leak sooner or later, or accidentally be left open, under which condition sewage will be forced back through the outlet into various fixtures.

* Adapted from *Mod. Hosp.* 47:94-98, Oct. 1936.

Normally all water pipes are under a positive pressure, which, however, because of a heavy draft on the city mains due to a fire or cutting off the water supply for repairs, is frequently and without warning changed to negative head. In this case the water is actually withdrawn from the water lines which in turn produces a partial vacuum in these lines. When this occurs, wherever water taps or water supply inlets are submerged, a siphonic action develops and the entire contents of the container will be siphoned back into the water lines, continuing even after the vacuum has been broken. This is known as back siphonage. It is important to add that this can be demonstrated and has been observed many times in various types of buildings. Due to these circumstances, not only the water supply of a hospital but supposedly sterile water, bandages, and instruments unknowingly may be contaminated, and supposedly safe plumbing become a health hazard.

As far as recent history is concerned, the possibility of the contamination of supposedly sterile instruments, water, and bandages in hospitals due to faulty plumbing was first announced by the Chicago Health Department in 1928. This discovery was the result of a study to determine the cause of frequent outbreaks of postoperative infections. At this time Joel I. Connolly, sanitary engineer with the Chicago Health Department, demonstrated by means of dyes that by draining water from several locations on floors below, the contents of an instrument sterilizer, a water closet, or bedpan washer could be siphoned into the water-supply lines. The potentialities of this are obvious if the usual contents of these containers had been involved. It was further demonstrated at that time that if the inlet valves to water sterilizers should leak, water containing dangerous contamination might enter the sterile water holders. Further, the direct solid pipe connection between the sewer lines and sterile water containers would, under suitable conditions of back pressure in the sewer lines, cause gross pollution of sterile water. This type of connection is particularly dangerous in a sterilizer or autoclave when a vacuum is created by the condensation of steam, and in the resulting suction the drain to the sewer is liable to introduce contamination to bandages or water supposedly sterile.

As a result of these discoveries the hospitals in Chicago were thoroughly surveyed and all defects remedied. As a result of these findings of defects in the design of hospital equipment, many manufacturing concerns have made serious efforts to remedy these hazards in equipment placed on the market during recent years.

A survey of faulty plumbing in four hospitals in St. Louis was made last year. In order to give to those interested an accurate picture of the conditions found as regards plumbing defects in hospitals and the many factors involved, the summarized data are presented in Tables 1 and 2. For simplicity and to facilitate tabulation (however subject to certain criticisms) the defects have been grouped into six general types according to the way in which they become a plumbing defect and health hazard as follows:

Type 1. Direct pipe connection between potable water supply and sewage or other contaminated water, with or without check or manual valve between, which, through excessive back pressure or negative head or both, might result in the contamination of the potable supply by sewage or polluted water. Example, Type 1: Sewage or waste water pumps

directly connected to potable water supply for priming purposes or for use in the dual capacity of pumping either contaminated or potable water; condensers directly connected to potable water supply and also to sewer lines; drains or overflow from potable water tanks directly connected to sewer lines; water softeners directly connected to sewer lines; mechanical refrigerating units directly connected to potable water supply and sewer lines.

TABLE I. NUMBER OF PLUMBING DEFECTS IN EACH HOSPITAL SURVEYED CLASSIFIED ACCORDING TO TYPES

	<i>Type 1</i>	<i>Type 2</i>	<i>Type 3</i>	<i>Type 4</i>	<i>Type 5</i>	<i>Type 6</i>	<i>Total</i>
Hospital A	1	348	13	2	3	25	392
Hospital B	2	483	13	2	2	5	507
Hospital C	1	106	0	0	0	3	110
Hospital D	3	176	4	0	5	0	188
Total	7	1113	30	4	10	33	1197

Type 2. Potable water supply inlets constantly submerged, or submerged because of direct or indirect stoppage that, due to a negative head or vacuum in the potable water supply lines, might result in the contamination of the potable water supply with sewage or polluted water through back siphonage. Example, Type 2: Constantly submerged inlets which are hazardous, even when the fixtures are in good operating condition. Siphon jets in water closets and urinal traps, laundry washing machines, swimming pools, instrument sterilizers; jets in bottom of water-closet bowls used for washing bedpans; bell supply bathtubs including the therapeutic tubs; water baths for many purposes; hydraulic lifts; processing tanks; bidet fixtures; filters; softeners; and stock-water basins; inlets not ordinarily submerged beneath the surface of the fixture contents, but which at times become submerged due to carelessness in filling or to stoppage of outlets; flushing rim openings in water closets, urinals, and slop sinks; lavatories; bathtubs; utility room sinks; dishwashing machines; spray heads in air washer, drinking fountains, and bedpan sterilizers.

Type 3. Sewer or waste lines so located that their leakage is due to corrosion or defect, and floor drains subject to back flow in refrigerators or other rooms where food or ice is stored, might result in the contamination of food, drinking water, and ice. Example, Type 3: Sewer lines located over potable water tanks, food preparation tables, food storage shelves, food processing equipment, such as pasteurizers, milk coolers, and cookers; floor drains located in refrigerators or other rooms where food is stored or in rooms where ice is made or prepared for use.

Type 4. Water supply subject to aerial pollution. Example, Type 4: Potable water supply tanks with open or loose tops located on roof of building or elsewhere within building.

Type 5. Possible infection of persons through use. Example, Type 5: Faultily designed drinking fountains which can be contaminated by user and result in a hazard to subsequent users.

Type 6. Direct unbroken connections between hospital equipment used in providing sterile water, instruments, and bandages, and sewer or waste lines, with or without check or manual valves between so that, due to excessive back pressure or negative head or both,

TABLE 2. NUMBER OF PLUMBING DEFECTS IN HOSPITALS CLASSIFIED ACCORDING TO TYPE AND EQUIPMENT INVOLVED

<i>Equipment</i>	<i>Type 1</i>	<i>Type 2</i>	<i>Type 3</i>	<i>Type 4</i>	<i>Type 5</i>	<i>Type 6</i>	<i>Total</i>
Aspirator	..	9	..	..	..	..	9
Autoclave	I	..	..	..	..	..	I
Autopsy sink	..	3	..	..	..	..	3
Autopsy table	..	5	..	..	..	..	5
Baby spray	..	2	..	..	..	..	2
Bath tub	..	153	..	..	..	..	153
Bedpan hopper	..	13	..	..	..	..	13
Bedpan sterilizer	..	10	..	..	..	..	10
Boiler blow-off	I	..	..	..	..	..	I
Brine tank	..	I	..	I	..	..	2
Condenser	..	2	..	..	..	..	2
Cooking kettle	..	18	..	..	..	..	18
Dish washer	..	12	..	..	..	..	12
Drinking fountain	..	10	..	..	10	..	20
Fish pond	..	I	..	..	..	..	I
Floor drain	4	..	..	..	4
Flush toilet	..	471	..	..	..	..	471
Hot water heater	2	..	..	..	..	..	2
Hydraulic elevator	I	..	..	..	..	..	I
Instrument steri- lizer	..	21	I	..	..	21	43
Laundry tray and washer	..	5	..	..	..	..	5
Loose hose	..	83	..	..	..	..	83
Potable water tank	3	..	..	3
Potato peeler	..	I	..	..	..	..	I
Pump	2	..	..	..	..	..	2
Sewer pipe	..	I	25	..	..	..	26
Sink	..	25	..	..	..	..	25
Solution tank	..	I	..	..	..	..	I
Steam cooker	..	2	..	..	..	..	2
Steam kettle	..	3	..	..	..	..	3
Sump	..	I	..	..	..	..	I
Wash basin	..	247	..	..	..	..	247
Water softener	..	I	..	..	..	..	I
Water sterilizer	..	12	..	..	..	12	24
Total	7	1113	30	4	10	33	1197

the sterile material may unknowingly become contaminated. This type also frequently falls into Type 2 when the water supply might become contaminated. Example, Type 6: Instrument sterilizers, water sterilizers, bandage sterilizers, and infant-food sterilizers.

Including all types of plumbing defects, a total of 1197 were found in these four hospitals (See Table 1). As indicated, in 33 instances Type 6 defect, or defective sterilizing equipment, was found. Table 2 indicates in detail the kind of equipment involved in the various types of hazards found. It is apparent that although safe hospital sterilizing equipment has been on the market for several years, the old unsafe types have not in every case been replaced.

There exist many plumbing defects in hospitals which involve the usual piping system found in all larger buildings. Keeping in mind the hydraulic principles previously discussed, a careful investigation of hospital plumbing by one experienced will reveal some existing defects. It is beyond the scope of this paper to discuss in detail methods of remedying faulty building plumbing or defective hospital sterilizing equipment, although this is a matter of vital importance to sanitation in hospitals as well as many other types of buildings. The literature in the last few years has contained considerable information which will be of assistance in eliminating as well as finding faulty plumbing installation.¹ Fortunately, defects in the design of equipment peculiar to hospitals have been given careful consideration and the new equipment is free from the most hazardous defects.

Many of the problems of protecting sterilization and water supply in hospitals involve technical hydraulic engineering considerations. Consequently it is recommended that careful surveys of plumbing in hospitals should be made by qualified, experienced sanitary engineers.

7. Planning Hospital Communication, by John Gorrell, M.D.*

A THOROUGH review of all methods of hospital communication should be made from time to time to be sure that the most economical and effective methods are used. This will include consideration of the salaries and the maintenance and depreciation costs involved in written messages and house mail, house organs, conveyors or tubes, telephones, paging systems, in-and-out systems, special alarm systems, patient-nurse calling and communication systems, and local or limited signal systems such as those on elevators and dumb-waiters.

Telephone service is a major method of hospital communication. Its cost is frequently considered to be the amount on the monthly statement. For at least two reasons this does not tell the complete story.

¹ *Cross-Connections in Plumbing and Water Supply Systems*, Wisconsin State Board of Health and Department of Hydraulic and Sanitary Engineers, University of Wisconsin, 1934; *Elimination of Health Hazards Caused by Faulty Plumbing Installations and Fixtures*, New York State Department of Health, Bulletin No. 28; J. I. Connolly, Safeguarding the sterile water supply, *Mod. Hosp.* 45:61, July 1935; M. Correll, *Sanitary drinking facilities*, United States Department of Labor, Women's Bureau, Bulletin No. 87, 1931; R. E. Lawrence, A study of defects in hospital sterilization practice, *J. Kansas M. Soc.* 33:200, June 1932.

* Adapted from *Mod. Hosp.* 46:87-91, Mar. 1936.

RECOMMENDED TYPES OF COMMUNICATION FOR HOSPITALS OF VARIOUS SIZES

TYPE OF COMMUNICATION	SIZE OF HOSPITAL IN BEDS					
	25	50	75-150	150-300	300-600	600-4p
Written messages (formal system)	No	No	Yes	Yes	Yes	Yes
Electrically written messages	No	No	No	Yes*	Yes*	Yes*
House organ	No	No	No	1 to 3 times a year	Alternate monthly	Monthly
Central mail	At office	At office	At office	At office	Departmental	Departmental
Conveyors or tubes	No	No	No	Either	Either	Either
Telephone switchboard	Manual	Manual	Manual	Manual	Automatic	Automatic
Special service	Fire	Fire	Fire	Watchman, fire	Watchman, fire	Watchman, fire
In-and-out system	Block	Block	Block	and police	and police	and police
Paging system	Audible coded	Audible coded	Audible coded	Electrical*	Electrical*	Electrical*
2nd choice				Silent coded	Silent	Silent
Patient-nurse	Standard	Standard	Standard	Audible vocal	Audible vocal	Audible vocal
				Standard†	Standard†	Standard†

* Especially if O.P.D. is large.
† Plus vocal (i.e. telephonic) service if possible.

On private automatic exchanges (P.A.X.) the expensive equipment is installed only on reasonable assurance that the utility will recover a rental to justify the installation. The contract, usually for five years or more, is a contingent liability. Cancellation of the contract in the case of one small hospital in the East cost the hospital nearly \$1000.

It is customary to bill in advance for equipment rental. When this sum is several hundred or several thousand dollars a month, there is a substantial amount of interest lost by paying in advance. The frequent procedure is to pay for the services rendered and ignore the requested prepayment. The company will not object.

The monthly statement usually lists first the number of excess local messages. This is the difference between the total outgoing local calls (where a charge is made for these) minus the number allotted per month with the type of equipment. The latter is usually only a small fraction of the total calls.

Local messages from patients, friends, and others should be routed through pay stations established in the hospital. This is businesslike; it relieves the hospital switchboard of this additional traffic (which usually comes at times of peak load) and it provides a source of revenue to the hospital.

The control of local messages becomes increasingly difficult as the number of employees, staff members, interns, and patients increases. More liberties are assumed because of the greater complexity of control. Complete control becomes virtually impossible. The restriction of direct lines to the community is well executed in most hospitals. With a P.A.X. this is easily accomplished by permitting only certain telephones to have unrestricted service. These unrestricted instruments can make connections with an outgoing trunk line by dialing a definite figure (as number 9) before dialing or giving the desired number. If a restricted phone is so dialed, the call will come up on the hospital board.

Some institutions require that all persons making outside local calls give their names and whether the call is for personal or business reasons. In large institutions if the call is for business and there is no reason to doubt the caller's honesty, no record is kept. In smaller hospitals (up to several hundred beds) the name of the person and nature of the call are recorded. The morning following this list is placed on the desk of the administrator.

Some large hospitals (400 beds and up) have been reasonably satisfied with the following plan of reducing personal local messages. The operator makes a slip of each message and at the end of the month the business office invoices the employee for the calls at the standard coin-box fee. While the collections from such statements are poor, one hospital of 400 beds found that the number of personal calls a month was reduced by about three times the cost of invoicing.

The telephone companies can almost always supply any type of service desired, as the engineering facilities are enormous. Yet too often the company is reluctant to provide the equipment or service unless it is specifically listed under the tariff, as the law provides that they cannot charge except as listed by the tariff. If the tariff does not mention the service

equipment, they do not know what rental to charge. Usually they select, with the user's permission, the nearest similar tariff-acknowledged equipment and charge its rental.

Rental of equipment is the most difficult item to control. With a P.A.X. the problem is worse than with a manual board. On the latter, the cost per instrument plus twenty-five to fifty cents each month will pay the rental up to the capacity of the board. With a P.A.X., however, the instrument rental is almost secondary.

Much of the cost of P.A.X. automatic switching equipment may be laid directly at the door of the administrator. The usual history is this: At the time the P.A.X. was ordered, the utility asked for certain essential information including the expected growth or expansion. Cables should be run for the maximum service to be reasonably anticipated in the coming five to twenty years. To be prepared for this expansion, re-service switching equipment is added. The administrator makes his estimates of future needs as large as he thinks possible; not as small as he feels will be probable. He does not realize that a monthly rental will be charged on the unneeded equipment. The net result is that the P.A.X. costs far more than he thought. Not being familiar with the technical details, he is unable to know if excessive equipment is being rented. The utility does not usually question his judgment.

A case in point demonstrates this. A 400-bed hospital with a large out-patient department had a monthly telephone bill of about \$1000. Equipment rental was a large percentage of this. Efforts were made to reduce this cost without success. An independent expert was called in. He discovered the above typical circumstances. He had the surplus equipment removed, which amounted to almost one-half of the switching and associated apparatus. He made other changes, added a few telephones and decreased the yearly cost by \$5000 without impairing service in the slightest.

In addition to equipment rental, there is the cost of installation. The utility supplies cable to the switchboard through a conduit supplied by the hospital. In small hospitals or those off the main highways there may also be cable costs, pole costs, and conduit costs to the building. Buried cable is fairly expensive. This makes it worth while to plan carefully for all future expansion and moving of instruments, as the installation of conduit in a completed building rapidly runs into great expense. Open wiring is so unsightly that most hospitals will not tolerate it. Conduits between floors, to boxes, to switchboards, and to apparatus rooms (where the P.A.X. is located) must all be supplied by the hospital at its own cost.

In many states, the cable is the property of the utility. In some states, the hospital may purchase it and thus avoid rental (as between buildings). It may then be maintained by the utility or the hospital, though the former is the preferred method. Wires from junction boxes to telephone instruments are placed and supplied by the telephone company. The cost of such installation covers the cost of wire. Thus it automatically becomes the property of the hospital but cannot be used for other circuits than utility telephone service without the specific permission of the utility because of the fire and personal-injury hazard.

One is sometimes provoked because of the size of a charge for a relatively simple instal-

lation. The consumer tends to overlook the loss to the company on other types of work. In a certain out-patient department, for example, the manual board was moved from an upper floor to the lobby side room where at dull periods the operator could act as general information clerk. The telephone company engineers estimated that this cost four to five hundred dollars. Yet they were only permitted to charge the price of a new installation, about \$125.

Maintenance of their own equipment is a problem of the utility. When the hospital owns the equipment, maintenance presents a real problem which is best solved in one of two clear-cut ways: (a) by a service contract with the firm selling and servicing that make of telephone equipment, or (b) by having this firm or other qualified service men render service upon call. During the days of part-time employment of utility telephone men, the utility companies were happy to have their men receive additional income. Usually the placing of maintenance responsibility on the hospital engineer or handyman is a grave error comparable to having the chief orderly do an appendectomy. Most administrators will not believe this until they have a large bill to pay.

Maintenance of a small hospital-owned system should not be expensive. For a board of two hundred lines, the company selling it (or installing it if used equipment is bought) will supply all labor and parts at cost for as little as \$75 to \$120 a year, depending upon the distance from metropolitan areas. Many a small private exchange needs no service for months.

On hospital-owned systems the cost of depreciation and obsolescence falls on the hospital. Sixteen per cent is the figure some utilities charge the subscriber for these items. A privately owned system is usually considered to have a life of not less than twenty years; many far older systems have little need for replacement due to depreciation or obsolescence. On this basis, 5 per cent of the cost of equipment is sufficient. If the wiring is all indoors and properly installed, its life will be about twice the life of the equipment.

Tolls and telegrams are usually easier to control than excess local messages unless there are unrestricted telephones available to patients, employees, and the general public. When the hospital renders any material aid in facilitating telegrams, a contract should be sought under the tariff which gives a percentage of the gross business to the hospital. In large hospitals this may be a substantial figure. If the contract is properly drawn it will include telegrams regardless of source, including hospital business. This refund is usually due even if there is only a direct line to call the messenger or a direct wire to telephone telegrams.

Money can frequently be saved by asking a taxicab company to put in a direct line at their own expense. This saves the cost of routing these calls through the hospital switchboard. The taxicab phone may be placed at the switchboard, the information desk, or near the doorman.

In addition to the usual outside and house telephone systems, there are telephones which connect only two or three stations, such as the information desk to the doorman or taxicab, or the secretary to the administrator's office. With a specialized mechanism of this type, a master station is so constructed that the individual using the equipment need not be closer than a yard to speak into or hear return messages from the equipment on his desk. The

user of a substation, of which there may be one or many, must place the receiver to her ear and ordinarily be within a foot of the instrument when speaking. This equipment has wide applications. For example, in some hospitals the administrator has on his desk a master station and a substation in every ward or nursing station, as well as in each major department. This in effect gives many of the advantages of a P.A.X. The cost for this type of mechanism runs from \$30 to \$60 a station plus the cable cost. For complete intracommunication, every substation must have wires from every other substation. The cable is expensive to purchase and requires careful installation and protection from injury.

Paging is possible under one or more of the following systems or combinations thereof: (A) audible: (1) bell, gong, telegraph sounder, or (2) spoken voice; and (B) visual: (1) lights, colored or clear, or (2) characters (figures or letters) illuminated but in code.

Audible calling has the advantage that it is inexpensive to install, to operate, and to maintain. It carries around corners and gets attention from persons who might not see any visual signal. The greatest disadvantage is that the effect is often annoying to patients and others.

When coded calling is used, whether audible or visible, rarely does anyone but the person called know who is wanted. Thus, he can ignore his code and others will not be aware that he is neglecting his duty. To avoid coding, the name of the person being paged must be spoken or printed so that all may read.

The closest to an ideal system appears to be the silent call where no coding is required.

The size of the paging system is proportionate to two factors—the size and the habits of the medical and administrative staffs. For example, a hospital with an average of 1000 to 1200 patients and a large out-patient department has a paging system composed of eight colored lights throughout the building, and, for the interns' quarters, a coded calling system of marked simplicity. Another hospital of 300 beds and a smaller out-patient department uses a paging system of some considerable cost. It is used almost continuously. In the former case, the system is used only for urgent or quasi-urgent calls; in the latter, the paging is done on the slightest provocation because the personnel have learned that it is rapid and accurate. The operator is the last person to question the merit of any request for paging. This is not a criticism of either institution because each organization is built around its paging system.

The paging system may also be used for simple announcements which are easily coded. For example, if a necropsy is scheduled for 11:20, the operator will call the resident on pathology and at the same time notify the entire medical staff, but not patients, by paging vocally, "Dr. Brown, Dr. Horace Brown . . . one one two oh." On visual systems the figure "13" is frequently used and members of the staff call the operator for details.

Frequently a runner is used to serve in lieu of an audible paging system after bedtime or in the interns' quarters at night when young people sleep through signals and gongs.

As a rule visual coded systems are among the least expensive, the most nearly foolproof, and the simplest. They may consist of any number of lights and a variety of possible positions. The usual method is to have from two to ten ordinary electric light bulbs of various

colors. The combination of color and position serves as the code. A recent development is an arrangement of bull's eye lights like figures on a clock. With this plan a greater number of possible codes is easily obtainable. By putting two or more different colored bulbs behind each bull's eye, the number of possible combinations increases with amazing speed.

An "in-and-out" system with full names on a glass is simple and flexible but for general paging purposes is too bulky. For example, the Montreal General Hospital has a square box containing approximately sixty squares, each with a different figure. Each member of the house staff, certain administrative officers, and a few department heads have numbers on this board. The system has a disadvantage of requiring at least sixty-one wires to every box in the hospital. Also the more lights that burn at one time, the lower becomes the luminosity of each unless this is especially provided for. It is the only system, however, that permits simultaneous paging of from one to sixty persons.

One common system uses colored lights flashed simultaneously with the number being paged. This multiplies the capacity of the system. Almost any type of visual coded system can have its present capacity doubled or quadrupled by the simple addition of colored lights and flickering lamps. This can usually be done without adding more than one or two wires, if any.

For limited paging service when cost is a factor, buzzers or bells may be used, but they are not ordinarily recommended.

Noncoded paging with audible apparatus is becoming more common. Everyone is familiar with the loud speaker type. If such a system is contemplated, the electrical characteristics should be well known. The early low voltage and low impedance type has proved unsatisfactory. A high voltage, exceedingly low amperage, high impedance system alone has given a clear tone and other requisite features.

Not available at present is an apparently ideal noncoded visual calling system. In this the name of the individual desired is flashed by means of spelling units. The number of persons to be called simultaneously is proportional to the units installed.

The paging system should be installed, when possible, at the time the building is constructed. This is not quite as important if a two-wire system is to be used, as in a high impedance vocal calling system, in which case a small cable of less size than a lead pencil carries more than enough current for many speakers. This cable is relatively inexpensive and suitable for indoor installation.

The source and type of power are influenced only by the type of equipment. No stringency should be exerted in the power unit of any paging system, and if dependence is placed upon batteries, a reserve source of power should always be available. A power failure in a paging system of a hospital of from 300 to 1200 beds immediately reduces the switchboard efficiency by at least 50 per cent and produces general chaos. Extensive utilization of the paging system is a habit.

Frequently the individual to be paged has his entire activities limited within one area, such as a single building or a portion of a building. There is no need to page him over the entire network, unless intensive calling in this restricted area has failed or there is reason

to believe that he is not there. The selection of areas is easy if the system has been planned with this in mind.

Fortunately almost no maintenance is required of any standard type of paging equipment. Unless of the condenser type, the microphone on the loud speaker type does not require periodical rebuilding. Replacement and repair of the equipment should be almost nil and it may be easily maintained by the average hospital engineer.

Communication between the bedridden patient and the nurse in charge is a problem upon which much valuable work has been performed. This system may be merely a buzzer or lighted signal at the nurse's desk. Most hospitals save nursing time by having also an indicating light above the patient's door. In every modern system the signal can be cancelled only at the bedside of the patient. This helps assure proper nursing and has a highly satisfactory effect on the patient. A superior mechanism is available in the form of a telephone or modified telephone placed at a patient's bedside. In the modified form the patient may speak and hear even though several feet away from the instrument.

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CHAPTER XXI. PLANT MAINTENANCE

I. How to Organize an Efficient Maintenance Department, *by John R. Mannix**

STUDIES of hospital per diem cost show that the cost of operation of the maintenance department varies from 15 cents to 35 cents per patient day. There are many causes for this variation but probably the most outstanding is the great difference in hospital construction. The problem of maintenance, therefore, should be given consideration at the time the hospital is planned. Since hospital operation requires twenty-four-hour service and frequent moving of patients and apparatus, hospital buildings and equipment are subject to constant hard usage. In order that the service to the patient may be uninterrupted it is necessary that all facilities be kept in a constant state of repair. While it is true that most hospitals completed during the last ten years have been planned so that the cost of maintenance can be kept at a minimum, nevertheless there are still in operation many old and poorly planned buildings requiring an excessive amount of upkeep.

Efficient operation of the maintenance department depends upon three factors: (1) a trained department head and an adequate personnel, (2) a sufficient budgetary allowance and adequately equipped shops, and (3) a schedule of work that provides for constant supervision and inspection, with a system of repair requisitions. This article will deal with the various phases of these requirements.

Supervision of the heat, light, and power plant and the maintenance department by one man is logical and advisable and this combination of activities justifies the employment of a high-grade individual. The officer in charge of these departments, who should be a licensed engineer, will be referred to in this article as the supervisor of service. His duties should include the supervision of engineers, firemen, oilers, electricians, plumbers, steam fitters, carpenters, painters, and in some instances plasterers, masons, ground keepers, watchmen, elevator operators, and truck drivers. He should have broad experience, ingenuity, and resourcefulness, as well as executive ability.

Every hospital has a vast amount of mechanical equipment and it is important that the supervisor of service be acquainted with the functions of the various building trades and have a knowledge of the operation of all mechanical equipment, including laundry, refrigeration, heating, plumbing, electrical, x-ray, and laboratory apparatus. He should have the ability to visualize possible improvements in hospital equipment and he should be able to judge when it is economical to repair a piece of worn equipment. It will be difficult to obtain an individual with these qualifications. Probably such a person can best be secured from the hospital, hotel, or building maintenance fields. The right man in this position will save his hospital many times his salary, while poor supervision of maintenance problems will cost the hospital dearly in terms of dollars as well as in inefficient operation.

The personnel of the maintenance department is divided into the following groups:

* Adapted from *Mod. Hosp.* 43:51-54, Feb. 1934.

steam fitters and plumbers, electricians, carpenters, painters, ground keepers, elevator operators, watchmen, and truck drivers. Detailed duties of these various groups are shown in Table 1. Smaller hospitals will, of course, combine several of the groups listed above, while in large hospitals it will be advisable to have a foreman in charge of each group. The supervisor of service should develop in detail a routine schedule of work for each of the groups, showing the hours of duty and the activities of each. At the time of employment each employee should be given a typewritten list of his duties. Such a system saves the department head much time and it leaves no misunderstanding as to the duties of each employee. Table 1 will serve as an outline for setting up a schedule of activities. These activities will of course vary in different institutions.

TABLE 1. DUTIES OF PERSONNEL

Supervisor of service

1. Make a complete inspection of all buildings and equipment at least once each week, originating requisitions for the approval of the administrative officer for all repairs that seem advisable.
2. Supervise the work of all members of the maintenance department. Check all requisitions daily and allot requisitions to the proper workman with necessary instructions.
3. Inspect all repairs after the mechanics have finished.
4. Originate purchase and stores requisitions for necessary supplies and submit to the administrative officer for approval.

Electricians

1. Make daily inspection of elevators, checking smoothness of operation, door closers and commutators.
2. Inspect all batteries and motors daily.
3. Inspect daily all lamps in stair wells, at exits and in paging and emergency lighting systems.
4. Inspect x-ray equipment, physiotherapy equipment and electrical sterilizers weekly.
5. Inspect centrifuges, electrical kitchen equipment and electrical clock system monthly.
6. Make all repairs on electrical equipment as instructed by supervisor of service.

Steam fitters and plumbers

1. Lubricate and inspect laundry machinery daily.
2. Inspect refrigeration equipment daily and lubricate monthly.
3. Inspect ventilating and humidifying equipment daily.
4. Clean grease traps weekly.
5. Clean clothes chutes weekly.
6. Inspect steam cooking equipment twice each month. Clean coffee urn faucets and gauge glasses twice monthly.
7. Inspect and clean water stills and sterilizers—except the electrical sterilizers—once each month.

8. Inspect all faucets, outside drains, plaster traps and other plumbing equipment monthly.

9. Inspect all fire fighting equipment monthly. Refill all extinguishers once each year.

10. Inspect traps, valves and expansion joints of heating equipment twice each year.

11. Drain and clean hot water tanks once each year.

12. Make all repairs as outlined by the supervisor of service to plumbing, heating, ventilating and other mechanical equipment.

Carpenters

1. Make all repairs to woodwork such as furniture, cabinets, doors and sashes.

2. Make all repairs to hardware, including door checks, locks, hinges and casters.

3. Inspect door checks once each year, replace worn parts and fill with fresh liquid.

4. Replace broken window glass.

5. Repair upholstery.

6. Repair window shades.

Painters

1. Take care of all painting and refinishing as outlined by the supervisor of service.

2. Make small plaster repairs when necessary.

Ground keepers

1. Roll and seed lawn in spring of year.

2. Mow and trim lawn regularly.

3. Prune all shrubbery.

4. Remove debris from grounds each morning.

5. Clean walks, outside steps, porches and roadway daily.

6. Remove snow from walks and roadway during winter months.

Elevator operators

1. Operate elevators in accordance with instructions of supervisor of service.

Watchmen

1. Make routine rounds of buildings and grounds as instructed.

2. See that no employee leaves the institution with a package unless he has a package permit signed by his department head.

3. Turn off all unnecessary heat and light at night. Close all windows except when it is desirable that they be opened for purpose of ventilation during the night.

4. Watch for and report to the maintenance department any leaks in the water and heating systems.

5. Be thoroughly familiar with all fire regulations.

Truck drivers

1. Operate general delivery truck.

2. Oil, grease, wash and maintain all hospital owned automobiles.

Many factors enter into the maintenance cost so that it is impossible to set up in this article budgets for hospitals of various sizes. However, it can be stated that three-quarters of one per cent of the total value of the hospital buildings and equipment is not an excessive amount to pay for hospital maintenance, and, generally speaking, if approximately this amount is not expended, it is probable that the hospital will fall into a state of disrepair and eventually a much greater expenditure will be required. Table 2 shows a maintenance personnel schedule that may be used as a guide in hospitals of varying bed capacities to originate a maintenance department personnel budget.

TABLE 2. PERSONNEL REQUIRED*

	SIZE OF HOSPITAL			
	100 beds	200 beds	300 beds	400 beds
Supervisor of service (part-time)	1	1	1	1
Electricians	1	1	2	2
Steam fitters	} 1	} 1	1	1
Plumbers			1	2
Carpenters	1	2	2	2
Painters	1	2	2	3

* The number of ground keepers, elevator operators, watchmen, and truck drivers required is so varied in different institutions that it is impossible to make any recommendations here.

Experience has demonstrated that because of lack of funds hospitals allot insufficient amounts for maintenance regardless of the fact that proper expenditures for this item probably pay greater dividends than any other hospital expenditure. This is probably more true today than it has been for many years. Such false economy will eventually prove expensive. It will be noted in Table 2 that the supervisor of service is listed as part-time. The theory is that 50 per cent of the salary of the head of this department will be charged to the heat, light, and power plant.

Immediate repair of worn or damaged equipment is important for two reasons. First, it is expensive to allow equipment to remain in a state of disrepair; second, it is annoying to patients, visitors, and personnel to find equipment in this state. These facts should be emphasized to all personnel. Nothing, for instance, is so annoying to a patient as a leaky faucet or a piece of wheeled equipment that is not properly oiled. The nurse is apt to overlook such items unless the importance of immediate repair is impressed upon her. Requisitions for routine repairs should be originated daily by the nursing supervisors and department heads, and the superintendent of nurses in her daily rounds should ascertain whether requisitions have been originated for repairs.

The supervisor of service should make rounds of the building at least once each week

and preferably oftener. He should note the general condition of plaster, paint, floors, radiators, plumbing, woodwork, electrical and mechanical equipment, and furnishings. He should originate for the approval of the administrative officer requisitions for the repair of such items as may come to his attention. These rounds will serve as a check on the routine system of requisitioning and in addition will bring to light many necessary repairs on mechanical equipment which a supervising nurse or a department head would often fail to recognize. The administrative officer should make a practice of accompanying the supervisor of service on his rounds at least once a month.

The maintenance department functions to the fullest extent when buildings and equipment are kept in a constant state of repair and when the letting of repair items to outside firms is reduced to a minimum. No orders for the repair of buildings and equipment should be let until it is evident that the job cannot be economically handled by the regular maintenance force. Before new equipment is purchased, estimates should be made of the cost of construction by the maintenance force. Many instances could be quoted where it has been possible to construct a piece of equipment at a cost of from 50 to 90 per cent less than quotations received from commercial organizations. It is not advisable, however, to make a manufacturing plant out of the hospital. It will always be impossible for the hospital to construct economically any large percentage of its equipment. The main function of the maintenance department is, of course, the handling of repairs.

The smooth and efficient operation of the maintenance department depends to a great degree upon well-planned and properly equipped shops. Table 3 gives a list of equipment that can be profitably installed in any hospital of 200 or more beds. The cost of this equipment should not exceed \$3000 and the average life of the equipment will be approximately ten years. Smaller institutions which find it advisable to sublet a large portion of the maintenance work will not find all of the listed equipment necessary. Such institutions will also find it advisable to combine two or perhaps all of the shops listed.

The average hospital administrator, probably because of the pressure of more immediate problems, has given little consideration to the control of fire hazards. Every hospital should have a group organized under the direction of a fire chief to take charge in case of fire. The supervisor of service is the logical department head to be appointed fire chief, inasmuch as he is probably better acquainted with the plan of the hospital than any other department head. There should be a prearranged plan of action since proper organization will save much confusion in case of fire. Key people should be appointed to report directly to the fire chief and to them definite duties should be assigned.

Fire drills should be conducted at least twice annually. This is particularly advisable in institutions that are not fireproof. The supervisor of service should be acquainted with all fire-fighting apparatus and should regularly inspect standpipe valves and fire hose. He should recharge all extinguishers at least once a year, marking each extinguisher with the recharging date. He should see that paper and other inflammable waste are not allowed to accumulate and that all fire exits are properly marked and kept clear of obstructions.

TABLE 3. MAINTENANCE SHOP EQUIPMENT

Electrical shop

Test Board—Arranged so that all electrical equipment may be tested. Outlets should be provided for all electrical currents used in the institution. Also, testers for fuses, radio, and clock system should be installed.

Workbench	Electric lathe
Ammeter	Pipe vises
Voltmeter	Bench vises
Ohmmeter	Ladders
Electric drill	Pipe rack
Electric emery wheel	Sets of electricians' tools

Steam fitters' and plumbers' shop

Workbench	Electric threading machine
Anvil	Pipe vises
Forge	Portable bench vise
Electric lathe	Gas, air, and vacuum connections
Blowtorch	Pressure testing apparatus
Gasoline furnace	Stocks and dies
Lead pot and ladle	Reseating tools
Electric drill	Snakes
Electric emery wheel	Ladders
One-ton chain hoist	Four-wheel truck
Welding outfit	Sets of plumbers' tools

Carpenters' shop

Workbench	Bench vises
Band saw	Sawhorses
Electric bench saw	Ladders
Electric planer and shaper	Lumber rack
Floor surfacing machine	Glass rack
Electric glue pot	Sets of carpenters' tools

Paint shop

Stripping tank (galvanized metal tank large enough for dipping furniture, with steam coils in bottom of tank to heat alkali solution).

Workbench	Paint spray booth (ventilated and light)
Drying oven	Dustproof drying room
Paint agitators	Ladders and window jacks
Complete sets of paint brushes	

Ground keepers' shop

Tractor with lawn mowing, rolling and snow removing devices	Sprinkling equipment
Wheelbarrows	Shovels, spades, picks, and rakes
Shrubbery trimmers	Hand lawn mower

2. Preventive Maintenance, by R. Starr Parker*

HOSPITAL equipment and building repairs can be controlled. Furthermore, not only can repairs and breakdowns be controlled but they can, in a great measure, be prevented. Preventive maintenance is executive control in the strictest sense of the word applied to mechanical and building upkeep in the hospital. Preventive maintenance anticipates wear, tear, and deterioration of buildings and equipment; it protects the original investment by a planned program of inspection and upkeep. In addition, preventive maintenance searches out the fundamental cause of each breakdown and makes preparation to avoid a similar situation arising on other equipment of the same type. Emergency calls are reduced to a minimum by systematic inspection and adjustment before trouble occurs and the machinery is kept in better condition so that a maximum of efficiency and service is obtained at a lower cost.

Every breakdown carries with it more than just the cost of the labor and material involved in the repairs. Rearrangements in departmental routine must be made to accommodate the work while the equipment is out of service; often a number of employees are idle while repairs are under way, thus accumulating nonproductive time which nevertheless must be paid for; frequently expensive temporary repairs must be made and then later torn down; some overtime duty is required. All these items are properly chargeable to, and add to, the final cost of the repairs. With the reduction of costly repairs through the use of a properly planned program of maintenance comes a decided reduction not only in maintenance expense but in departmental operating costs as well. Lower per pound costs in the laundry, reduced dietary unit expense, and improved service to the patients are all a direct result of the properly controlled maintenance program.

The application of the principles involved in preventive maintenance requires planning and control of the most careful kind and involves prescheduling of the efforts of the mechanical department to put the work on a routine basis.

A seasonal separation of the work is a good starting point for building up a maintenance program. Obviously neither paint nor painter can achieve the best results on outside surfaces in subzero weather. Hence it is wise to delegate all outside painting to the summer season. Furthermore, to take advantage of the clemency of the weather, plan to accomplish the balance of the outside work during this period. That means checking over and repairing roofs, flashings, gutters, and wall copings; pointing up brick walls; painting boulevard light posts, window sashes, boiler smokestack—everything exposed, in fact—with particular emphasis placed on the minor details.

Such a thorough schedule, to be sure, will place most of the mechanics outside at this time, but if a planned program has been in effect there will be no more emergency or routine work arising than can be accommodated on the rainy days that force the crew inside. All power, maintenance, and grounds employees are on a forty-eight-hour, six-day week.

In the sweltering days of July and August a heating plant is about the least required

* Adapted from *Mod. Hosp.* 50:78-80, Feb. 1938.

thing around the hospital. For that reason those sweltering days afford the best possible time to check over the heating system. All traps and valves should be cleaned, vacuum pumps gone over thoroughly, and the hot water system flushed out. Then next winter every radiator will radiate its proper quota of B.T.U.'s without pounding pipes.

For the same reasons that the heating system is overhauled in the summer, the refrigerating and air conditioning plants will be fitted into the schedule for attention some time in January when they are least required. In many instances refrigerating and air conditioning plant troubles are blamed on lack of sufficient equipment capacity when in reality the fault is due to lack of proper upkeep. Unfortunately, refrigeration equipment is like the proverbial leaky roof, "you can't fix it when it's raining and when t'ain't raining it don't need fixin'." Any time and effort expended cleaning condensers, sprays, and filters, replacing old packing, checking valves and rings and pumps, renewing faulty insulation, or draining the low side during cold weather will pay big dividends the next summer in shorter operating time under conditions that will not overwork the machines.

So far the maintenance schedule has fallen into two classifications: that work which must be done when weather permits and that work which must be done when the equipment is in least demand. Now we come to the third division which deals specifically with equipment maintenance.

Every machine or building starts deteriorating from the moment it is placed in service. Use, abuse, and the elements all combine to break down the original efficiency to a point at which the mechanical staff must operate to rejuvenate the investment. The ancient adage "a stitch in time saves nine" is the backbone of a preventive maintenance program. Minor repairs or adjustments, almost negligible and frequently overlooked, can easily result in a highly involved job requiring considerable expense. True maintenance demands a rigidly adhered to, periodic, thorough inspection of buildings and equipment. Total freedom from breakdown is not guaranteed by such a plan, but freedom from the majority of breakdowns upsetting to departmental routine is assured.

A maintenance inspection routine must begin with some review, either written or mental, of the equipment to be taken care of and a classification into the different types. A lineup usually resolves itself into a classification of the mechanical trades involved. For example, the switchboard, x-ray, elevators, electrotherapy, wiring, and the like will be the specific responsibility of the electricians; the heating plant, refrigerating, and plumbing systems will be delegated to the pipe fitters; woodwork to the carpenters, as is indicated in the accompanying work schedules. In a well-organized department each man has his specific duties to perform, inspections to make, and equipment to maintain according to his capabilities, and is held directly responsible for some part of the maintenance program.

WEEKLY SCHEDULE OF EQUIPMENT INSPECTION

Monday: Kitchen and diet departments equipment and plumbing, sterilizers, utility room plumbing, No. 1 and No. 2 doctors' and visitors' elevators, and South Wing heating system appliances are checked.

Tuesday: Physical therapy equipment, x-ray equipment, No. 7 service and personnel building elevators, laundry equipment, and plumbing are inspected.

Wednesday: Kitchen equipment and plumbing, all exhaust fans, motors, starting equipment, and Nurses' Home elevators are inspected, and plumbing installed.

Thursday: Main Wing heating system appliances, pneumatic tube system, evacuator, heating control compressor, all storage battery units, and laundry equipment are checked.

Friday: Nurses' Home heating system and mechanical equipment and No. 3 and No. 4 service elevators are checked, and new installations or alterations made.

Saturday: Kitchen, doctors' registry and paging board, nurses' call system control, and shop equipment are checked.

Note: Operating room and x-rays are checked on daily; the monthly inspection of elevator door, signal, and safety controls is made at night, and usually takes three nights. The schedule is planned to take mechanics through each department at least twice a week to reduce the number of emergency shop calls.

BOILER AND ENGINE ROOM MAINTENANCE SCHEDULE

General: All equipment is installed in duplicate and changed over weekly, except boilers and generators. The smaller engine generator is operated from Saturday noon to Monday morning because of lighter loads. The large engine generator is operated throughout the week. Boilers are changed about every thirty days, and walls, grates, and stoker are inspected and repaired. Each piece of equipment inspected is adjusted and put in shape before it goes back on the line.

Summer: Vacuum pumps are overhauled, packing renewed, valves faced, and pins bushed; feed water pumps are checked over; heaters are cleaned; large engine generator is checked over thoroughly; major boiler repairs are made as required; the hot well pump is overhauled and hot water pumps checked over.

Winter: Refrigerating equipment is checked up, condensers cleaned, compressors are torn down, pumps checked over, the brine cooler drained, smaller engine generator checked over thoroughly, engine room motors cleaned and painted, and power house equipment and lines painted as required.

LIGHT, HEAT, AND POWER DEPARTMENT

Head Engineer: Stands three-day watches weekly; takes care of power plant maintenance three days weekly.

Two Watch Engineers: Operate boiler and power plant, generating and refrigerating equipment six days weekly.

One Watch Engineer: Relief engineer three days weekly; stands three-day watches weekly.

One Boiler Room Helper: On 11 P.M. to 7 A.M. shift; takes care of night emergency calls, handles ashes, cleans equipment, assists engineer six nights weekly.

One Ice Man: Takes care of ice production and distribution and relieves day boiler room helper on off days.

BUILDING, EQUIPMENT, AND GROUNDS MAINTENANCE

Master Mechanic: With proper assistants makes major installations, alterations, and repairs and overhauls equipment. Assists in supervision of work of mechanics.

Cabinet Maker: Constructs and repairs furnishings.

Carpenter, Plasterer: Precedes painters in preparing rooms and buildings for painting; carpenter maintenance of all kinds.

Electrician: Inspects all elevator, signal, communication, and electrical equipment, and makes necessary adjustments or alterations; installs new equipment.

Maintenance Helper: On duty from 7 A.M. to 4 P.M. Answers minor emergency calls, such as replacing light bulbs, minor plumbing and electrical repairs, and assists mechanics.

On duty from 3 P.M. to 11 P.M. Duties are the same as above, except he assists engineer instead of mechanics and answers emergency calls on his shift.

Stock Keeper: Shop mechanic, maintains stock supplies, checks in tools, overhauls radios, dictographs, and other equipment delivered to shop. (Sunday and afternoon relief.)

Truck Driver: Takes student nurses to classes; makes hospital pick-ups and deliveries.

Master Painter and Helper: Paints and refinishes surfaces of all types.

Head Grounds Keeper: Directs and assists with planting, transplanting, and grounds maintenance; with assistants inspects and maintains exterior of buildings, residences, roadways, garages, except for painting.

Building Carpenter: Assists grounds keeper in maintenance and outside repairs.

Grounds Helper: Assists grounds keeper as directed.

Allowance must always be made for emergency calls, and the same provisions can be set up as in other departments of the hospital to take care of this type of work. A plan should not be so rigid that it cannot be altered as the occasion dictates—in fact, it will be found that constant adjustments will be required. And that's the maintenance supervisor's job.

The selection of a maintenance man should be carefully made. He should be picked for a particular ability to perform routine inspection; at the same time he must have the required training and experience to make such adjustments and repairs as might be called for. If anything, he should be as well skilled in his trade as a mechanic engaged in new installations only, and should, in addition, have almost a sixth sense in diagnosing trouble and anticipating the results of depreciation.

Constant training of maintenance mechanics should not be ignored, and the supervisor should see that each mechanic has available the operating instructions relating to the equipment under his care. Not only should these instructions be available, but they should be understood. At all times the mechanic should be made to do a workmanlike job on anything he attempts. It may take a little longer to get the job done, but the habit of good work should be encouraged as a necessary part of eventual cost reductions.

A sufficient stock of maintenance equipment, tools, motor-driven machines, and supplies is an important factor in the quality and job time of every maintenance order. Nothing runs up the cost so much as to be forced to spend fifteen cents worth of time finding a one-cent bolt. Maintenance work is fully as much of a production job as any straight line assembly plant.

It is the generally accepted opinion that well-arranged, well-equipped, well-stocked shops are synonymous with an efficient, economical department. Certainly such surround-

ings lend themselves to orderly, workmanlike results and reflect the caliber of the work turned out. Slipshod storage of tools and supplies breeds slipshod workmanship. A centralization of supplies and tools with constant attention given to maintaining orderly arrangements of the stock is well worth while. Many hospital superintendents go even further and insist upon maintenance shops which vie with an operating room for cleanliness and good order, believing, and rightly so, that such shops lend themselves to lower repair costs and improved service.

The whole principle of preventive maintenance can be applied as well in a small institution as in a large hospital. The larger the hospital, the greater the number of mechanics and the division and subdivision of the work; in the smaller hospital the work must be done by fewer men.

A true and measurable saving, with a gradual reduction in overall repair costs, will result from a planned program of maintenance. Better service rendered, improved departmental output, and increased building and equipment life will be the final reward of a carefully worked-out plan for keeping the equipment in good operating condition and the buildings in repair.

3. What Causes Hospital Fires? *by V. L. Douthit**

RECORDS show that approximately one-fourth of hospital fires are caused by either electricity or spontaneous ignition. Do not accept the fallacious belief that the common causes of fires in general are not applicable to hospitals, for fire loss statistics show that the causes of hospital fires are not particularly different from those of other occupancies. Several records of the causes of fire in hospitals have been maintained, some on the basis of the number of fires and others on the basis of the amount of loss. They cover varying reaches of territory for different periods of time. The following table, prepared from records of the National Fire Protection Association, an international clearing house for authoritative information on fire protection and prevention, is typical of such studies and discloses the causes of a group of 104 hospital fires over a wide area.

First on the list are electrical causes, accounting for 23 out of 104 fires. Of the 23 fires caused by electricity, considerably more than one-half were from defective wiring. Other forms of electrical causes were: electric iron left on, short circuit in x-ray machine, short circuit on Christmas tree lights, short circuit igniting gas in elevator well, short circuit in lighting fixtures, electric light bulb igniting holiday decorations, defective elevator motor, electric light bulb igniting ray film, radio charger left on, arc resulting from fuse plugged with pennies. These, then, are some of the electrical causes of hospital fires. Do we need any more persuasive argument of the need to curb the activity of the hospital handy man, the jack-of-all-trades and master of none? It behooves us to curb him before he annihilates us. Electricity, although a faithful and powerful servant when guided by knowing hands, is a brute "gone hog-wild" under the guidance of the ignorant. We can do much to reduce

* Adapted from *Mod. Hosp.* 47:77-79, Sept. 1936. Mr. Douthit is Fire Protection Engineer for the Insurance Company of North America.

Electrical causes	23
Sparks on roofs	12
Ignition of grease or flammable liquid on stove	6
Careless smoking	5
Miscellaneous known causes	5
Stoves, furnaces, boilers and their pipes	4
Incendiarism	4
Spontaneous ignition	4
Defective chimneys and flues	3
Lightning	3
Defective oil burner	2
Steam pipes	2
Careless use of matches	1
Escaping gas	1
Upset lamp or stove	1
Careless fumigation	1
Gas jet igniting curtain	1
Gasoline	1
Unknown	25
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Total fires	104

this major cause of fire if we insist on first-class electrical installations and repairs by qualified engineers, and electrical products that bear the stamp of approval of Underwriters' Laboratories.

Next in predominance are the fires originating from sparks on roofs, 12 of the 104 fires being so caused. Wooden roofs are becoming less and less common in new hospital construction, but many hospitals are still so covered, and the number of fires originating there is evidence of the potential hazard existing in that form of roof construction. Sparks attack not only roofs surfaced with wood shingles, which are notorious for the speed with which they ignite, but also the wood sheathing and wood supports under approved composition surfacing, the wood cornices and other combustible roof structures. Substantial fireproof construction—concrete, reinforced concrete or tile—is the sure means of eliminating this hazard and of reducing the number of roof fires.

The number of fires caused by the ignition of grease or flammable liquids on stoves—6 out of 104—reflects poor housekeeping and general carelessness. Grease on stoves, syrups and floor wax boiling over, rubbing alcohol and medicinal oil igniting while being heated contribute to this cause of fire. Employees need to be cautioned about such simple things as keeping the stove clean, keeping highly flammable and volatile substances away from hot stoves, and properly attending those articles that may be safely heated on ordinary stoves.

Careless smoking and careless use of matches caused 5 of the 104 hospital fires. Most of these fires were caused by cigarettes dropped into a film drawer, into piles of oily rags, behind a radiator or on a curtain. One was caused by a lighted match tossed unceremoniously

into a clothes chute. That these fires were preventable is readily apparent. In many hospitals smoking by the personnel when on duty is strictly prohibited, but our investigations disclose that employees do occasionally, if not frequently, smoke while on duty. The consensus of fire prevention engineers is that it would be far safer from a fire prevention point of view to provide a smoking room for the use of the staff and to permit occasional smoking there rather than to run the risk of the demolition of the hospital and the accompanying loss of life as the result of a cigarette hastily and carelessly tossed aside in an effort to avoid detection.

Of that group titled miscellaneous known causes, which was responsible for 5 of the fires, these were the elements: rubbish near a heater, explosion of disinfecting fluid, film igniting in motion picture machine booth, boiler support giving way and breaking oil pipes, and films in storage igniting. To these may be added several of the less prominent causes of the original list: careless use of matches, escaping gas, upset lamp or stove, careless fumigation, gas jet igniting curtain, and gasoline igniting, all obvious acts of carelessness or poor housekeeping. But in this group of 104 fires, no less than 22, almost a quarter of them, were caused by just such simple indiscretions.

Our classification of causes of 104 hospital fires indicates that 4 were caused by stoves, furnaces, boilers and their pipes, 3 by defective chimneys and flues, 2 by defective oil burners, and 2 by steam pipes. Since these are all rather closely associated, let us consider them together as heating and power causes. This group caused 11 of our 104 fires, or a little more than one-tenth of the total. Other studies place this cause even higher in importance, some indicating that it is a cause of as many as 21 per cent of all institutional fires. Whether heating is a cause of 10 per cent or 21 per cent of all hospital fires, or some percentage in between, it is an important consideration. All heating furnaces and boilers should be situated in separate fireproof buildings entirely away from the hospital. If they must be located in the basement of the hospital, they should be in separate fireproof sections, cut off from the remainder of the building by masonry walls and ceiling, and with openings, if openings into the main building are necessary, protected by approved, automatically operating fire doors.

A few years ago an improperly installed oil-fired boiler in a three-story stone, wood-joisted institution fell, breaking the fuel oil pipe and setting fire to the building, causing the loss of five lives. The provision of an isolated boiler house in this instance would have avoided that loss of life and property.

All chimneys should be of brick laid flat from the ground or ledged solidly into masonry walls. Chimney walls should be at least eight inches thick and have tile flue lining. Stove-pipes or boiler breeching should never pass through or near combustible walls, partitions, or floors. Chimneys and pipes should be thoroughly cleaned at least once each year to prevent large soot accumulations; these become ignited and spread to roofs of buildings.

Steam pipes, although comparatively frequent causes of fire, are not generally recognized as such. Guards for steam pipes should be of metal, and pipes should in all cases have adequate clearance from combustible material.

Of the 4 hospital fires listed in our classification as having been caused by incendiarism, all were started by mental patients or by pyromaniacs not inmates of the hospitals involved in the fires.

Spontaneous ignition, a cause of 4 of the 104 fires, is another preventable cause. Oil mops and oily rags should not be kept exposed in closets. Such mops should be stored in tight metal containers, and accumulations of oily rags, rubbish, papers and the like should not be permitted.

Lightning rod equipment is now tested and approved by Underwriters' Laboratories, and all hospital buildings situated on high or otherwise exposed points should have that protection.

Other causes of hospital fires not specifically brought out in this study are the use of high volatiles, dangerous chemicals, x-ray films, or other films not of the "safety" or slow-burning type. It goes without saying that with the exception of a limited quantity of anesthetic gases and chemicals kept in incombustible rooms and containers, these articles and commodities have no place in the modern hospital.

The 104 hospital fires studied were fairly well distributed throughout the day and night, the number occurring between 6 A.M. and 6 P.M. just about equaling those occurring from 6 P.M. to 6 A.M. Sixty-two per cent of the fires occurred during the winter months in the period from November 1 to May 1.

Half of the hospitals involved had brick walls with wood interiors, 47 per cent were of frame construction, and only 3 per cent were of fire-resistive construction.

The following indicates the large portion of these hospital fires that resulted in severe losses: slight loss, 19; loss under \$1000, 10; \$1000 to \$10,000, 17; \$10,000 to \$50,000, 29; \$50,000 to \$100,000, 10; more than \$100,000, 4; not stated, 11. Of these 104 hospital fires, 24 resulted in total losses.

Five points to remember:

1. The importance of erecting hospital buildings of the sturdiest fireproof construction, and the necessity for eliminating fire hazards in hospitals of the non-fireproof type.
2. The need for adequate first-aid fire fighting equipment for hospitals, designed for use by the hospital personnel to halt fire before the arrival of the fire department.
3. The adequate training of hospital personnel to prevent and combat fire.
4. The desirability of transferring the fire risk from hospitals to insuring companies established for that purpose.
5. The desirability of insurance against other types of risks.

In providing improvements either in your property or in your insurance, you should consult the rating or underwriting organization in whose jurisdiction your hospital lies, or the engineering department of your insurance company. From them much assistance can be secured without cost, the benefits of which may be in the form of a saving in insurance premium or in the more important form of providing a safer shelter for patients.

4. Hospital Surfaces; How to Finish and Protect Them, *by John C. Dinsmore and R. C. Buerki, M.D.**

HOSPITALS are constantly confronted with problems of adequate surface maintenance and preparation and care of floors, walls, and various items of equipment that require painting or surfacing. Painting is the usual method of finishing walls in the great majority of hospitals because its initial cost is low. Paint as a finish has several undesirable features, one of the greatest of which is the problem of cleaning.

It is possible that the usual ways of cleaning painted surfaces are not the best and that this is responsible for the short life of paint. Painted walls are ordinarily cleaned by washing with soap or a tri-sodium phosphate solution. It is possible to cover painted surfaces with a coating of wax which serves as a protection and makes it possible to wash the painted surface with less harm. The difficulty lies in the labor required for removal of the wax before repainting. Painted wall surfaces are also frequently coated with starch or casein in a colorless form to protect the surface. These finishes are easily removed with soap and water, taking the dirt with them.

The coating for a surface varies according to (1) the nature of the surface, (2) the influences to which it is to be exposed, and (3) the final appearance. The first two considerations determine the nature and the degree of protection to be provided, while the third is important from the standpoint of decoration. For some areas protection is secondary to appearance and in other areas utility is more important. A combination of beauty with maximum utility is the objective of every type of wall covering. Several different materials may be used to finish the walls of a building. The most important of these finishing materials are paint, varnish, enamel, distemper, bakelite, and manufactured wall covering.

Following is a typical recipe for paint, the figures representing the respective weights to be used:¹ boiled linseed oil, 30; zinc oxide, 20; basic lead oxide, 20; barites, 20; colored pigment, 5; white spirits, 4; dryer, 1. Oil, the basis of the mixture, is the vehicle that carries the coloring pigments and supplies the cohesive quality. In drying, the oil forms a tough coating material called linoxin which is the principal agent in resisting the destructive agencies that attack the surface.

Linseed oil consists of several unsaturated fatty acids, the mixed acids being termed linoleic acid. It is particularly adapted to painting because of its tendency to form the tough coat of linoxin when dried in the air. Before the oil can be used as a paint vehicle, it must be treated in order to remove impurities and to improve its drying qualities. Impurities are removed by heating the oil and allowing it to settle. The product of this process is flat oil, a slow drying, dull finish oil used in making the cheaper grades of paint which do not have great durability. When flat oil is heated for several hours, during which time certain dryers are added, boiled oil is the product. The most commonly used catalytes are the oxides of lead, manganese, and cobalt, the last being most effective. Boiled oil produces a

* Adapted from *Mod. Hosp.* 42:94-98, Feb. 1934.

¹ R. H. Truelove, *Oils, pigments, paints, and varnishes*, p. 34.

harder surface with more gloss and longer life. It has been the backbone of the paint industry for many years. A third type of linseed oil is stand oil, which is simply boiled oil made more viscous by prolonged boiling.² By a process of polymerization of the molecules, the oil is made thick and heavy, forming a high gloss finish when dry. This third type of linseed oil is used primarily in making enamel.

Numerous pigments may be used in paints, but the ones most generally used are zinc oxide and basic lead oxide. Either of these may be used alone or in combination with other pigments. Best results are obtained by a combination of lead and zinc materials. Though they excel all other pigments, lead oxide is too soft and zinc oxide is too brittle for the best service. A combination tending to eliminate the weakness of each produces a pigment of unusual desirability.

Barites are added to give the paint weight and body. This inert material adds nothing to the quality of the paint, but without it the paint would tend to run off the high spots on the surface.

Colored pigments are added to paint either at the time of the manufacture or just before using. Because of the small percentage of colored pigment in the total volume of paint, the kind of pigment used has little effect upon the quality of the paint provided it is of permanent color. The most commonly used color pigments are (1) drop black (bone black), (2) graphite (allotropic modification of carbon), (3) oxides of iron, (4) umber (an earth color), (5) yellow chrome (lead or zinc chromate), (6) Prussian blue (ferric ferrocyanide), and (7) lakes (precipitated dye in barites or other inerts).³

White spirit and turpentine are thinners put in the paint to facilitate application. They are volatile and evaporate rapidly after the paint is spread. The amount of thinner required depends upon the method of application to be used. Spraying requires the largest amount of thinner. The small quantity of dryer that is found in paint is that which has been added to the linseed oil to decrease its setting time.

Varnish is produced by substituting resin for the pigment and coloring of paint. This finish dries from the evaporation of a volatile and the solidification of the remaining homogenous film compound of an intimate blend of copal resin and linseed oil. The ingredients are stand oil, thinner, and copal resin. Resin is a mineral deposit found in several parts of the world. It was first discovered and commercialized in Zanzibar, off the east coast of Africa. There are several varieties of resin but the most valuable is copal resin.

Enamel is made by combining pigment with varnish oil. It has a high gloss finish resembling an exceedingly fine ground paint. Its use is limited mostly to inside work, although it has proved satisfactory as a protective coat on outside surfaces.

Distemper is a cheap paint made from a water solution of glue and pigment. It is thin and easily applied, resembling whitewash in this respect. When disinfecting a room is a constant necessity, distemper may be applied cheaply and quickly at regular intervals and the room will always be bright and sanitary. This finish will not stand heavy washing but the addition of boiled oil greatly increases its wearing qualities.

² *Ibid.*, p. 16.

³ *Ibid.*, pp. 69, 79.

A process has been perfected recently whereby bakelite can be put into liquid form to be used as paint. When spread out in a thin coat, it possesses the characteristics generally attributed to bakelite in its better known form. It is mechanically strong, chemically resistant, and in every way quite immune to the ravages of time. Drying in from four to six hours, it forms a perfect coat for any surface. It is resilient and tough rather than hard and brittle, thus giving a surface of high resistance to abrasion. Bakelite is far more flexible than ordinary varnish or enamel. Bakelite varnish is made by combining bakelite resin with certain vehicles that keep it in a liquid form when not exposed to air. Its uses are the same as those of ordinary varnish except that its great resistance makes it usable in many places where ordinary varnish would be scratched, chipped, or marred by heat. To make a super-enamel, bakelite may be mixed with pigments and a greater proportion of oil. The resulting product possesses all the qualities of standard enamel as well as the good features of bakelite.

Prepared wall coverings of plywood, rubber, and linoleum similar to that used for floor covering have been brought to a stage of perfection at a cost that should not be overlooked. Willingness to investigate the possibilities of new ideas in construction and maintenance is one important factor in keeping a building operating at its highest efficiency. While paint is the generally accepted wall covering for all practical purposes at the present time, there exists the possibility that it is not the best or the most economical finish to be had. Generally speaking, it might be said that the main features of these new types of wall covering are their permanence and durability. With the exception of plywood, most of them are made to withstand any amount of cleaning without losing their finish and color. Neither are they subject to the various ailments common to paint and plaster such as peeling and cracking. Under ordinary wear, prepared wall covering is as permanent as the wall to which it is attached and is durable under washings.

The cost of installing a wall covering of this kind is one of the important factors to be taken under consideration, especially when it is to be used for rehabilitation rather than original construction. Unless the walls receive sufficient wear to necessitate constant cleaning and maintenance expense, the prepared wall covering might not be economical, but if there is continual upkeep cost, a long-time saving will no doubt be effected by installing such a surface. When considered alone the prices paid for manufactured wall coverings may seem to be too high for serious consideration, but when one remembers that walls so finished are permanent and that their upkeep is a bare minimum, the cost, when allocated over a long period and compared with the cost of paint plus refinishing and maintenance expense, may not be excessive.

The care of floors is likewise still in the experimental stage. There has been no definite decision as to which is the most durable and suitable type of floor for a hospital. New problems in connection with the care of existing floors constantly appear.

The problem of finding a flooring material that is suitable and serviceable in every respect is one of great importance to the planner or manager of any large institution. Floors must be serviceable. In addition, the floor must contribute to the general attractiveness of

every room and hallway. Qualities in a floor covering that promote durability, attractiveness, and ease of care vary with the use. For example, the kind of floor desirable in an office would be unsuitable for a laboratory where more cleaning is necessary, or in a hallway where the wear is heavy. The type of work done in a building partly determines the kind of flooring material that should be used.

Cost is always a factor in the selection of a flooring material. This includes not only the original outlay for the floor itself but also the expense of upkeep and of providing care. The initial expense is a definite, limited amount. Once paid, it is out of the way. But the cost of upkeep, to which is coupled that of routine cleaning, presents a never-ending expense that may increase with the age of the floor. To ignore quality and suitability in order to effect a low cost may prove expensive.

Varieties of flooring material now available for construction and rehabilitation purposes are so numerous that it should not be difficult to find a floor suitable for every situation. For general utility purposes, however, only a few materials excel in serviceability and moderate cost, leaving only the surfaces that must withstand unusual wear and strain to be taken under consideration for selection of the most suitable flooring material. The types of flooring are wood, linoleum, rubber, cork, asphalt compounds, cement, terrazzo, vitreous tile, marble, and slate. Each of these has given more or less satisfactory service, although not to equal degrees or at equal cost. Laboratory tests have been made on these materials for the purpose of showing conclusively the effect of service, with the result that when all factors are considered, the selection of the best all-around floor is still difficult.

Floors must endure usage primarily. But in addition they must be sanitary, comfortable, safe, easy to maintain, easy to repair, attractive, and reasonably priced. The most common forms of usage to which hospital floors are submitted are wear, heat, sunlight, moisture, and chemicals. No flooring material is now available that will give satisfaction under all these conditions and at the same time possess other desirable features, such as attractiveness, comfort, and noiselessness. It is, therefore, often advisable to vary the floor from one section of the building to another.

Of course at all times the problem of first cost injects itself into a consideration of the hospital floor. This is always a vital factor in the determination of the floor to be installed. No attempt should be made at setting up a schedule of floor costs because of the inaccuracy of such a table. The question is merely raised at this point to draw attention to several important factors that enter into the after-cost of any installation.

It is possible that the floor that requires regular maintenance in the way of waxing, polishing, or surface treating may produce a maintenance cost that will more than offset the difference in price between it and another of a higher initial cost. Likewise, of two floors both requiring refinishing work, the amount of finishing and the ease with which it is accomplished may be important factors in determining the ultimate cost when the original costs differ. Another phase in a determination of flooring installation is the relative expectancy of use. It is needless to say that, all things else being equal, a floor that will last fifteen

years at an initial cost of a dollar a foot is less expensive than a floor that will last five years at an initial cost of fifty cents a foot.

Hard woods make a beautiful floor, but most wood finishes are lasting only under comparatively light wear. All woods, especially the soft varieties, have lost their former popularity as a flooring material for hospitals because they rank low in practically all of the tests given to flooring material, namely, abrasion, absorption of water and stains, and resistance to chemicals. Furthermore, the general use of wood floors has been discontinued because of the fire hazard they create. In the matter of cleaning, wood also presents a problem, for all woods contain potash which reacts chemically with the ordinarily used soda base soaps, shortening the life of the most resistant wood floors.

Linoleum is an acceptable all-service flooring material, with a remarkably low initial and upkeep cost. It is low in absorbency, making it rank high for sanitation. It is average in resistance to stains and pressure, but low in resistance to chemicals. Its wearing qualities, although not of the best, can be made as good as the average floor with proper care. In recent years it has been made available in very attractive colors and patterns. Having a cork base, it is relatively noiseless.

Rubber is one of the best all-around flooring materials that can be used in a hospital. It was given first place for use in every division of the hospital except the service corridors by a committee on floors of the American Hospital Association.⁴ Under test it ranks among the best in every laboratory procedure, including tests on resistance to abrasion, pressure, fire, absorbency, chemicals, and staining. The least satisfactory quality is resistance to stains. In addition it is attractive, comfortable, noiseless, and, if properly handled, inexpensive to maintain.

Cork has the particular advantages of noiselessness, comfort, and low absorbency. In other respects it ranks below the average of flooring materials in general; it is easily affected by chemicals and stains, and only normal in resistance to abrasion and pressure. Where sound control is desired, however, cork floors can be of great benefit.

Asphalt compounds, such as monolithic or block composition floors, are advantageous, largely because of their low initial cost. They make possible a great variety of color patterns and are fairly comfortable and noiseless, but in such respects as ease of repair, appearance, and resistance to chemicals, they rank low. Because of the rough condition of the surface the best of sanitation is not possible. Being durable, they can be put to the greatest advantage in service corridors and storage rooms.

Cement, when treated with hardener and filler and suitably colored, is fairly acceptable where hard floors are desired. It is particularly adaptable to service corridors, laundries, and similar places. Although it can be and is used throughout the hospital it is not particularly desirable except from the standpoint of its low fire hazard. Being low in resistance to stains and chemicals it is not at all satisfactory in laboratories and similarly used rooms.

⁴ Report of the Committee on Floors of the A.H.A., Bul. No. 47, 2d ed., pp. 13-14.

Terrazzo can be placed as the most desirable of the hard-type floors for use throughout the hospital, except in service corridors, laboratories, and operating rooms. It ranks high in abrasion tests and resistance to fire, pressure, and absorbency. It should not be used in the above-mentioned places because of its reaction to chemicals and ease of staining. Its outstanding qualities are its durability and beauty.

Vitreous tile can be used to the best advantage where terrazzo fails to give good service, namely, in operating rooms, laboratories, and service rooms. It ranks high in all flooring tests, particularly in resistance to chemicals. It makes possible an attractive floor as well as a serviceable one, its only marked disadvantage being the sanitation problem presented by the joints, which are more or less absorbent.

Marble is one of the most beautiful of all flooring materials, but its cost is relatively high. Like terrazzo, marble has excellent wearing qualities but tends to stain easily and reacts readily to chemicals. Its cost makes it impractical for use except where appearance is of prime importance.

Slate ranked highest in the index of merit of all the flooring materials under test in the previously mentioned reports of the committee on floors. However, the committee recommended it for use only in operating rooms, and in that case only as third choice. Slate possesses to a high degree such qualities as ease of sanitation, long wear, resistance to chemicals and fire, but it is a cold, unattractive floor, tending to be noisy. Its extreme hardness causes it to check and crack easily, which further lessens its attractiveness. Except where appearance can be generally disregarded, slate is exceeded in value by most other hard floors.

In conclusion, let it be understood that this report is not intended as a finished study of the subject of surfacing, but is merely a description and explanation of the field. The problem of the selection of the best flooring and the best wall covering is an arduous one involving both laboratory and practical testing over a period of time sufficient to permit the application of every possible test.

5. Fuel; What the Hospital Executive Should Know about It, by *William J. Overton**

MANY classifications of the grades of coal have been made on the basis of their different properties. The classification most commonly known to the layman, however, is as follows: anthracite, semianthracite, bituminous, semibituminous, subbituminous, and lignite.

Anthracite is the best of all coals for steaming purposes. It is practically all carbon and is relatively clean, but is difficult to ignite. It burns slowly with comparatively little smoke. It has deservedly earned the common name of "hard coal" from its firm substance. It has high heating value, often liberating over 14,000 B.T.U. per pound of fuel when burned in air. It contains a very small percentage of volatile constituents and a hotter flame results from its combustion.

* Adapted from *Mod. Hosp.* 39:84-88, Nov. 1932.

Broken	$3\frac{1}{2}$	to	$4\frac{1}{2}$	inches
Egg	$2\frac{5}{16}$	to	$3\frac{1}{4}$	inches
Stove	$1\frac{5}{8}$	to	$2\frac{5}{16}$	inches
Chestnut	$\frac{7}{8}$	to	$1\frac{5}{8}$	inches
Pea	$\frac{9}{16}$	to	$\frac{7}{8}$	inch
No. 1 buckwheat	$\frac{5}{16}$	to	$\frac{9}{16}$	inch
No. 2 buckwheat or rice	$\frac{3}{16}$	to	$\frac{5}{16}$	inch
No. 3 buckwheat or barley	$\frac{3}{32}$	to	$\frac{3}{16}$	inch
Culm	$\frac{3}{32}$			inch

It is marketed in the screened sizes shown in the accompanying table. The larger sizes of anthracite are rarely used for commercial steam generating purposes, as the demand for domestic use now limits its supply. In commercial plants the sizes generally found are No. 1, No. 2, and No. 3 buckwheat. In some plants culm is burned in combination with bituminous coal in certain ratios, such as a two-to-one mixture, by which the best results in both economy and capacity are obtained. Semianthracite burns more rapidly than anthracite coal. It burns with a relatively short flame, but with a longer flame than that produced by anthracite. This is because the percentage of volatile constituents is higher in the semianthracite coal. It leaves but few clinkers and burns with little smoke. It is sometimes designated as hard coal.

In this country bituminous coal is by far the most common. Because of the variations in the percentages of volatile matter, some bituminous coal burns freely with a short flame, while other varieties burn with a longer flame. Some are difficult to burn without considerable smoke, and larger clinkers are usually formed. Highly volatile coals are generally used for manufacturing illuminating gas, as the mechanical stoker equipment has not yet been perfected that will burn this type of coal economically and efficiently. The heat value of bituminous coal varies from below 11,000 to over 14,000 B.T.U. per pound. There is no classification of bituminous coal as to size that holds true in all localities. Grading of western bituminous coal differs from that of the eastern coal. The American Society of Mechanical Engineers suggests the following grading:

1. Run-of-mine coal: the unscreened coal as taken from the mine.
2. Lump coal: that which passes over a bar screen $1\frac{1}{4}$ inches wide.
3. Nut coal: that which passes through a bar screen with $1\frac{1}{4}$ -inch openings and over one with $\frac{3}{4}$ -inch openings.
4. Slack coal: that which passes through a bar screen with $\frac{3}{4}$ -inch openings.

Some bituminous coal is similar to anthracite in appearance, possessing a high heating value with little moisture and a low percentage of ash. It burns with little smoke. The coal is much softer than the so-called hard coals and is excellent for steaming purposes, but because of the limited supply only small quantities of it are used.

The medium by which the quantity of heat is measured is known as the British thermal unit (B.T.U.). While until recently this has ordinarily been defined as the amount of heat necessary to raise the temperature of one pound of water at a definite temperature 1° F.,

the value generally accepted is $\frac{1}{180}$ of the amount of heat required to raise one pound of pure water from ice point (32° F.) to the steam point (212° F.), both at standard pressure, or a mechanical equivalent of one B.T.U. equaling 778 foot pounds.

When purchasing the aforementioned coals, it is necessary to know their content. This can be determined only by a responsible chemist. A proximate analysis of fuel reports the percentage by weight of moisture, fixed carbon, ash, volatile matter, B.T.U., and sulphur. To obtain the sample for the chemist's analysis (presuming that a size of coal has been selected to suit the type of grates and stoker), when delivery is made to the bunker, a pile containing about 200 pounds should be taken and thoroughly mixed by coning and reconing until only two samples are kept to fill two quart containers. These should be sealed airtight and forwarded to the laboratory. It is not good practice to allow the sample that is to be tested to stand in an open vessel for any length of time, as some of the moisture will evaporate and the result will be an incorrect analysis.

In specifying the grade of coal to be used, the following procedure is recommended: (1) bidding should be done strictly on a competitive basis; (2) the field should be broadened for both bidder and purchaser; (3) if coal other than that specified is substituted there should be a penalty clause to protect the purchaser; (4) if the coal is uniformly poorer than the standard specified, there should be a basis for cancellation, the coal to be hauled away at no cost to the purchaser.

The following information should be requested on the bid sheet:

Moisture	Freight rate
Volatile	Name of railroad to be shipped
Sulphur	over
Ash	Cost per gross or net ton at
Fusion point	mine
B.T.U.	Cost per gross or net ton trimmed at
Point of shipment	bunkers
Name of mine owner	Cost of boating, if any
If coal is purchased from a jobber, state	Cost of trucking, if any
mine	Name of seam
Name of county and state where	
mined	
If there should be any difference between our scale weights and the railroad's bill	
of lading, the adjustment should not exceed 1 per cent.	

With the aid of a buyer's guide, the purchaser will have little difficulty in determining whether or not he is receiving the coal he orders, as he has found out the location, the seam and mine, and the names of the county, mine operator, and railroad and can check against the bidder. When he receives the analysis made after the coal has been delivered, he has the whole story before him, practically from the mine to the furnace. Careful consideration should be given beforehand to the different phases of the coal problem. For instance, if the specifications call for a coal with 7 per cent ash and the shipper has delivered

a coal that proves on analysis to have 10 per cent ash, this would mean that 3 per cent of ash has been paid for in freight, only to be assigned later to the ash pile.

The total number of B.T.U.'s should conform as closely as possible to specifications, allowing a few degrees one way or the other for discrepancies in the analysis.

The volatile content should be given serious thought, as some of the higher volatile coals, although economical to use, cause a smoke nuisance, which is a violation of local health ordinances in some sections. If fuel has been used and the evaporation of water per pound of fuel falls below the known quantity, everything else being equal, it is an indication that some other coal has been substituted and an investigation should be instituted at once.

The grade of coal is an important point, as some stokers when burning bituminous coal require a coking quality and some a noncoking quality. The size may play an important part in both efficiency and cost. If a smaller size coal can be advantageously consumed, it can be purchased at a lower figure. This holds true with anthracite. Some specifications should include the fusion temperature that may be required, as this is a measure to determine clinkering, especially when bituminous coal is burned with anthracite. The bituminous coal should have a high fusion point and should be of a coking quality so that the anthracite is not released but fused in with the bituminous, both being consumed at the same time. Anthracite may for all purposes carry a certain percentage of rock, slate, or bone, according to the size of the coal. A piece of coal containing scarcely any carbon is classed as rock. One with less than 40 per cent carbon is slate. One with over 65 per cent carbon is classed as coal. These coals must be free from mud or discoloration.

A considerable amount of slate and rock with not so much bone will make the coal pile look dull instead of fairly bright. Care should be taken to have the specifications call for the percentage of slate, rock, or bone in coal. The high percentage of this foreign matter causes excessive clinkering, not only running up the cost of the fuel per ton but also ruining the furnace brickwork, because of the adhesion of clinkers.

The storage of coal is an important factor because of the influence of certain conditions, such as the risk of labor difficulties, the distance of the consumer from the mine, and transportation facilities. As anthracite is not subject to spontaneous combustion, this fuel is ideal to store in unlimited amounts in one pile. Bituminous coal cannot be stored this way, as spontaneous combustion may take place in a short time. An important feature is the initial temperature of coal at the time of storage. It should be handled during the coolest part of the day, since the heat is absorbed at this time and liberated at night. Unless there is some logical reason for the storage of coal in large quantities, it is best to keep as little of it on hand as practicable. The storage place should of course be chosen with reference to convenience and the ease of transferring the fuel from the bunkers to the furnace. Labor, like coal, represents money and it is often more difficult to handle than the inanimate fuel.

Care should be taken in the selection of the coal and ash handling equipment. A chemical change, generally in the interior, manifests itself in the storage pile. Two changes may take place in the coal, first, the oxidation of the inorganic matter, such as pyrites, whereby

there is a marked increase in volume, sometimes an increase in weight and obvious disintegration, and second, the oxidation of the organic matter of the actual coal. This cannot be detected by the naked eye, but leads to the loss of heating value, through the oxidation of hydrogen and carbon and the absorption of oxygen by the unsaturated hydrocarbon.

There are two general questions in the economical production of steam: (1) Are you deriving the full benefit from your fuel? (2) Are you putting as much as possible of the heat generated into the boiler? All the coal that is bought should be burned economically and efficiently and all the heat from the coal that is burned should be used. Considerable heat may be lost up the smokestack or through the furnace walls. The boiler settings should be examined for air leaks or porous bricks, loose mortar joints or any air leakage into the furnace. After the source of these leaks is discovered repairs should be made immediately.

The composition of coal varies over such a wide range and the methods of firing have to be altered so greatly to suit the various coals and the innumerable types of furnaces in which they are burned that any instructions given for the handling of different fuels must of necessity be general. For each kind of coal, there is some method of firing that will give the best results for each set of conditions. General rules can be suggested, but the best results will be obtained only by following methods that are expedient and practicable and best suited to the specific conditions.

Before combustion can occur, the temperature of the fuel must be raised to the ignition point. Thus the temperature at which the heat is liberated by the union of the fuel with oxygen is evolved faster than it is conducted away. Then the fuel becomes hotter, and the union proceeds more rapidly. This in turn heats the fuel and the immediate surroundings faster, until flame occurs. After the ignition temperature is once obtained, the combustion will proceed automatically. Oxygen, which is necessary for combustion for burning fuel, is usually obtained from the air and may be forced through the fuel bed by mechanical means or natural stack drafts. Atmospheric air is a mechanical mixture of oxygen and nitrogen and other gases, the latter two not being combustible. When oxygen meets carbon, hydrogen, sulphur, or other combustibles in the presence of heat, chemical union occurs and what is known as combustion takes place and heat results. A solution of the draft problem may lie in the consideration of the following significant factors: the quantity of the draft in relation to carbon dioxide; the amount of heat allowed to escape up the smokestack; the fuel bed thickness; proper regulation of the boiler damper; proper size and grade of the fuel to be consumed with the type of stoker and furnace in use.

The most modern conception of fuel economy and efficiency comes in the form of pulverized coal. However, it has been used only in central and industrial power plants. It cannot be advantageously applied to some already established institutional plants, as the type of boiler setting in an old installation is not adaptable to the change.

Fuel oil is the only liquid fuel sufficiently abundant for steam generation. While geologists are not in entire agreement as to the origin of petroleum, that is, whether it is of ani-

mal or vegetable matter, the generally accepted opinion is that it is of an organic nature. Crude oil, while varying widely in physical characteristics, may be broadly divided into three classes in accordance with the predominant base or the nature of the residue after distillation. These are: paraffin base, which in general includes the lighter oils; asphaltic base, which ordinarily includes the heavier grades of oils; and mixed base, which contains varying proportions of paraffin and asphaltic bases and includes the broad classes of the intermediate grade oils. When fuel oil is to be used, certain physical characteristics must be taken into consideration in the determination of the suitability of the available supply. These characteristics, together with the manner in which they affect the suitability for use in steam generation, may be summarized as follows:

The specific gravity or ratio of weight of a given volume of oil to that of an equal volume of water should be determined. The specific gravity is of importance particularly in the case of lighter oils, since it has a bearing on the calorific value. In general, the higher the specific gravity the lower the content of the lighter hydrocarbons and the lower the heat value of the oil. The specific gravity balance is determined by the pycnometer or the hydrometer. Specific gravities are generally reported at 60° F. Conversion of Baumé readings to specific gravity is necessary and it is essential that the Baumé hydrometer be accurate. This is a standard, weighted glass bulb with a graduated rod indicating the depth to which it sinks in the fluid under test. When oil is purchased on the basis of its volume at 60° F., the volume can be adjusted by using the coefficient known to the purchaser in its relation to the locality in which the oil is produced.

Flash point specifications are contingent upon viscosity requirements as well as upon general consideration for safety requirements and evaporation losses.

Viscosity is perhaps the most important factor in determining the suitability of available fuel oils, particularly when these oils are heavy. The lighter oils have a low viscosity. Oils of the same specific gravity do not necessarily have the same viscosity. The viscosity may determine the methods of handling and pumping. In specifying for the purchase of fuel oil, the following procedures are recommended:

All purchasing should be done on a competitive basis in regard to quality and price.

The bidder should give the specific gravity, viscosity, flash point, chemical composition, and heat value of the oil; the name of the oil and by what field it was produced; whether or not the oil is crude oil, a refining residuum, a distillate, or a blend; fuel F.O.B. tank car, barges, or tank.

Information should be supplied as to whether it contains a specific amount of water and sulphur.

It should not contain more than a trace of sand, clay, or dirt.

It should be understood that the fuel oil delivered for the term of the contract be as specified. The frequent or continual failure of the contractor to deliver oil of the specified quality should be considered sufficient cause for the cancellation of the contract.

Individual conditions and requirements at the point of consumption influence to a large degree the specifications for viscosity, flash point, and sulphur content.

Definite specifications can be drawn for a fuel oil that will meet practically all requirements; it is therefore advisable when purchasing fuel oil that the individual requirements be studied and that as lenient specifications as possible be written to ensure the delivery of an oil that will be satisfactory for the conditions for which it was intended.

If a change is to be made from coal to fuel oil it is recommended that the furnace brickwork be changed to suit the oil, but in such a manner that the stoker or grates can be used again should the price of oil increase. A comprehensive study should be given the two fuels. This does not necessarily imply a comparison of the cost of a ton of coal to a ton of oil, because oil has a far greater heating value than an equal weight of coal. While oil has a fairly high heating value, there is a tremendous difference in the heating value of different grades of coal. Therefore, when making a comparison it is necessary to know and understand the kind of coal under consideration as well as its heating value per pound.

Using oil as a fuel saves labor, as it simplifies firing. Oil fuel has many distinct advantages over coal. It is simple to handle. It eliminates the complicated mechanical stoker and its attendant labor items. It does not disintegrate or lose its calorific value when stored. The equal heat value in oil occupies comparatively much less space than coal. The cleanliness of the furnace room and engine room through the elimination of dust is an advantage. Of course, it is understood that when changing from coal to oil, an additional expense will be incurred in the purchase of the oil-burning equipment and storage tanks.

There are two general classes of burners used today in burning oil fuel—mechanical and steam atomizing burners. When atomized the oil must be brought into contact with a sufficient amount of air for combustion in a manner that assures a thorough mixture of oil and air, and at the same time the amount supplied must be kept to a minimum, controlled by the proper apparatus for introducing air into the furnace. Mechanical burners seem to be the most popular for hospital use, as they atomize the oil in such a rapid manner that ignition is more rapid than with steam atomizers and results in a shorter flame. As more than one burner is required for firing a boiler, it is quite simple for the operator to control any given load by disengaging burners as the load decreases and engaging additional burners as the load increases. The intensity of the fire can be instantly regulated to meet the fluctuating loads, ensuring a high degree of flexibility. Moreover, this fuel is so simple to control that perfect combustion is obtainable.

The first step toward fuel economy and efficiency must be taken in the fields of the fundamental sciences of chemistry, physics, and mathematics, including a study of the elements of thermodynamics. In addition to a practical knowledge of the basic principles of heat transfer and air flow and the intelligent application of them in the various systems, a firm grasp must be taken of the engineering methods of attacking and analyzing these problems, not only from the point of view of scientific theory but also with due consideration of the limitations imposed by practice and by costs.

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CHAPTER XXII. PURCHASING

I. Benefits and Problems of Standardization, by *Arthur M. Calvin**

THE subject of standardization of hospital furnishings, equipment, and supplies has undoubtedly been given very serious consideration. As far back as 1923 I recall that Miss Margaret Rogers, superintendent of Saint Luke's Hospital, Saint Paul, who was appointed the first chairman of this committee by the American Hospital Association, made a very strenuous effort to bring something out of this subject. Her contacts with the National Bureau of Standards of the United States Department of Commerce created a general interest which later resulted in a combined effort of hospitals, hospital supply firms, the American Hospital Association, the American College of Surgeons, and the National Bureau of Standards working together to standardize and simplify many of our present hospital furnishings, equipment, and supplies.

During the latter years John Hatfield of Philadelphia and his committee contributed greatly to the progress of standardization and simplification, working hand in hand with Dr. MacEachern of the American College of Surgeons, who not only assisted materially in the standardization of surgical dressings but proceeded to educate the surgeons and the hospitals to utilize standardized surgical dressings. As hospital administrators, we are cognizant of the fact that this subject has received considerable attention; hard work, time, and money have been spent that economy and efficiency in our hospitals will be the ultimate result. Now that we have definite recommendations, what are we going to do with them?

Since 1923 there has been an annual report submitted by the committee of the American Hospital Association on this subject and two articles appeared in *Hospitals*, one by William E. Braithwaite of the Division of Simplified Practice of the United States Bureau of Standards and the other by John N. Hatfield, administrator of the Pennsylvania Hospital in Philadelphia. I have been informed that an effort is being made to publish a manual of standards which may be placed on the administrator's desk for daily use. There is a probability that many hospital administrators have neglected to follow the recommendations made by this committee, in spite of the fact that many have signed approved forms and returned them to the United States Department of Commerce. The obvious reason for this is that the written reports of the committee have been presented in sections in accordance with the progress made in standardization and simplification of certain articles. However, I am confident that more interest will be given to this subject when we have a manual which will include all recommendations for standardization and simplification of furnishings, equipment, and supplies to date. Of course it would not be practical to junk our present furnishings and equipment, but it is to be expected that when we buy new furnishings

* Adapted from *Hospitals* 12:44-48, June 1938.

and equipment we should endeavor to see that they are standardized. The reason, of course, is twofold—first, economy and, second, efficiency.

Most of us know something about the cost of printing a form. It is made up of two parts, first the expense of setting up the type, etc., making the proof and, later, the corrections, changes, and getting it ready for printing. The second part is the cost of printing the desired number of copies which includes the cost of labor, paper, overhead, etc. Thus, two costs will be designated—the “preparation” charge and the “printing” charge. The sum of these two items represents the initial cost of the form. There is also a third item that is generally lost sight of and yet it is strictly a cost factor. It is interest on inventory. The longer the printed material remains in the stock room the greater the interest charge. In addition to this item of interest, there is another charge that may be taken into account with equally good reason. This cost arises through the need of having storage facilities (floor space, shelving, etc.). Supervision, inventory, and the inclusion of any miscellaneous item are overhead. These costs may be taken into account by increasing the interest rate fifty to one hundred per cent or more as may be ascertained by an analysis of a particular instance. Roughly, doubling the interest rate would seem to be a fair estimate of the cost of administration of stationery supplies. Thus, the complete cost of any form is composed of the amount paid the printer for its production and the interest and administrative expenses charged against it for the time it is on hand as stock. If only a few copies are printed, the first named factor is high and the second is low, and when a large number of copies are printed, the first item is low and the second is high.

This illustration is not only true of printing forms but also of furnishings, equipment, and supplies, which, if standardized, will greatly lower the cost to the manufacturer, to the hospital or the consumer, and, obviously, to the patient. The work of simplification is to get rid of the obsolete, the unnecessary, and the waste. It has been found by the Department of Commerce in a survey made some years ago that the average waste of six great industries ran from twenty-nine to sixty-four per cent of the time, labor, effort, and money put into those great trades. It has been ascertained by engineers that ten million dollars could be saved annually through standardization and simplification in the fabricated products alone.

Back in the “nineties,” we are told, there were 180 different lamp sockets. Today there are six. General Motors reduced its 13,000 minor parts to 2100. In a chain of three hotels it was estimated that a saving of \$100,000 a year has been made because they have reduced their fifteen designs of carpet to three, their thirty styles of glassware to ten, and so on down. One rubber company reduced its 1600 items to six. Thus, we see not only a saving but a decrease in waste, in stock, production costs, selling expenses, misunderstandings, investments, etc. It increases turn-over, promptness of delivery, and automatically raises the quality of the produce. It reduced the catalog of one firm from 47 pages to the back of the company’s letterhead.

Hospital Beds. In the year 1923 the movement for a reduction in the variety of lengths, widths, and heights of hospital beds was initiated by a committee of the American Hospi-

tal Association, which made a survey resulting in a most unbelievable number of varieties in the size of beds in use in hospitals and on sale by the manufacturers. There were 33 variations in length, 34 variations in width, and 44 varieties in height. With the cooperation and advice of the Division of Simplified Practice of the United States Department of Commerce, it has been possible to compile the data that have been assembled for such purpose that the Division of Simplified Practice was able to call a meeting in Washington in the year 1923, which resulted in the adoption of the following recommendations:

1. For general hospital use: (a) length, inside distance between head and foot posts, 78 inches; (b) width of end angles of springs, 36 inches; (c) height from floor to top of springs, inclusive of casters, etc., 27 inches.
2. For certain institutional use, the need of a narrower bed is recognized. In these cases the recommended width is 33 inches with the length and height the same as in 1 above.
3. For private-room use where a wider than standard bed is desired, the recommended width is 39 inches with the other dimensions the same as in 1 above.

The recommendation for beds was reaffirmed by the Standing Committee in 1926, 1929, 1935, and 1937.

John Hatfield reports that the chairman of the Standing Committee decided that the simplified practice recommendation dealing with beds was being followed by the hospitals or consumer group which signed the recommendation. Questionnaires were prepared and distributed to assure a cross-section picture of all types and sizes of institutional bed equipment. A questionnaire was sent to all hospitals in the United States having 200 beds or more, to one-half of the hospitals having between 100 and 200 beds, and to one-third of the hospitals having less than 100 beds. Reports from 1900 institutions revealed a total variation of some 900 different combinations of ward bed sizes, 1104 hospitals reported 663 different combinations of private bed sizes, and 585 hospitals reported 500 different combinations of special-type bed sizes. However, an analysis disclosed that the sizes recommended in the established standards predominated to the extent that the Committee reaffirmed them. The variation in size in most instances is negligible and carries with it no practical advantages from the standpoint of use or aesthetic value. It does mean, however, that the cost of manufacture has been appreciably increased so that hospital institutions, as a whole, have paid considerably more for these beds than would have been the case had they specified standard sizes.

A recent study of bed sizes brought out three points which are worthy of emphasis: (1) that established standard sizes predominated to such an extent that the Committee reaffirmed them; (2) that a chaotic condition exists in that many institutions are using both standard and off-standard sizes; and (3) that the number of purchasers who apparently have given little or no thought to standard sizes is astoundingly high. The conclusion is that the predominance of the established standard sizes is brought about not by conscious attention of the purchasers to the recognition of standards but by the efforts of the manu-

facturers in using the standards in both their producing and selling departments. The benefits of standardization and simplification are brought to us in spite of ourselves.

Bed Blankets. In 1924 the Committee made a study of bed blankets in which they reported that blankets could be reduced from 78 different sizes to 12, and recently a reduction has been made to 11 although I do not have the information relative to which one of the 12 sizes was dropped.

The standardization of bed blankets had already been accomplished by the manufacturers of cotton, wool, and cotton-and-wool-mixed blankets. With the American Hospital Association cooperating in this work, the chairman of the Simplification Committee attended the meeting in which these different sizes were reduced 85 per cent. The various sizes recommended are:

54 x 76 inches	66 x 80 inches	66 x 84 inches
60 x 76 inches	68 x 80 inches	72 x 84 inches
64 x 76 inches	70 x 80 inches	66 x 90 inches
60 x 80 inches	60 x 84 inches	80 x 90 inches

These sizes are being complied with by the hospitals inasmuch as the manufacturers are adhering to the recommended specifications.

Hospital Chinaware. The Committee on Standardization of Hospital Furnishings, Equipment, and Supplies worked with the American Hotel Association and the American Vitified China Manufacturers' Association in the standardization of hotel chinaware in the year 1925 and thereby eliminated many of the items. The items were reduced from 700 to 345 and were accepted as reported by 38 per cent of the hospitals, while about 54 per cent of the hospitals reported some preference. In preparing the questionnaire, our hospital Standardization Committee further eliminated a number of items on this list that did not particularly apply to hospitals. After a further conference with representatives from the pottery industries and other interested groups, a list of 115 items was adopted. These sizes were to be made in three weights as covered by the trade names rolled edge, medium weight, and light weight. These recommendations were accepted by the hospitals and manufacturers and became effective July 1, 1925.

One of the large manufacturers of chinaware stated that 78 per cent of their sales were concentrated on 42 items which were carried in stock and manufactured in four different patterns and could be purchased at from 10 per cent to 15 per cent less than the regular price. Thus, if hospital requirements could be supplied in these 42 items, the result would be reduced prices, smaller inventories, and no delay in filling orders.

Hospital and Institutional Cotton Textiles. These items were reduced from 454 to 26, or a 94 per cent reduction.

Pillow cases: It was shown that 20 different sizes were in use, exclusive of children's. Over 50 per cent of the hospitals reporting used the size 36 by 42 inches and 40 per cent of the hospitals used 36 by 45 inches.

Sheets: There were 11 different sizes used for adults. Of these sizes the 72-by-99-inch is the most popular size. However, the 72-by-108-inch is rapidly becoming a favorite.

Bedspreads: Twenty-two varieties of sizes were reported; 74 per cent of the hospitals were using 72-by-90-inch and 23 per cent were using the 63-by-90-inch size.

Bath towels: Twenty-nine sizes were reported as being used; 52 per cent of the hospitals were using the size 18 by 36 inches and 39 per cent were using the size 22 by 44 inches.

Face towels: Thirty sizes were reported in use; 55 per cent of the hospitals were using the 18-by-36-inch size and 32 per cent were using the 16-by-32-inch size.

Bed pads: Forty-eight different sizes were reported as being used; 61 per cent of the hospitals were using the 36-by-72-inch size and 23 per cent were using the 36-by-76-inch size.

Draw sheets: Fifty-five sizes reported; 56 per cent of the hospitals were using 54 by 72 inch and 8 per cent were using 45 by 72 inch; 5 per cent using 36 by 72 inch, and the balance using the remaining 52 sizes.

Bureau scarfs: Thirty-nine sizes reported; 63 per cent of the hospitals were using 18 by 45 inch and the balance were using the remaining 38 sizes.

Hand towels: Fifty-one sizes reported; 53 per cent of the hospitals were using 13 by 18 inch and the others divided up among the 50 remaining sizes.

This survey indicates a tendency on the part of the hospitals to reduce their commodities to fewer items.

In submitting the adopted sizes of textiles for adult beds, from 70 to 91 per cent of the hospitals were willing to accept the sizes recommended.

Adhesive Plaster. Adhesive plaster was reduced from 26 various sizes to 15 in 1928 and the Standing Committee reaffirmed the recommendation without change in 1929, 1931, 1934, and 1937. The recommendation provided for two widths in two lengths of adhesive in rolls and for five widths in seven lengths of adhesive on spools, as originally presented to the conference. The schedule provided for adhesive in rolls in only the 12-inch width by 5-yard length. Some manufacturers felt that the demand for 7-inch adhesive in one-yard length warranted its retention in the recommendation and this item was added to the schedule with the understanding that consideration be given to its elimination at the time of the first revision. The 1½-inch width in 5-yard length of adhesive on spools was added to the list of retained sizes for the same reason and with the same proviso.

In 1937 the chairman of the Standing Committee suggested that the recommendation be revised by the addition of a 12-inch-by-10-yard hospital roll to be supplied—cut and uncut—and the elimination of the 7-inch-by-1-yard plaster in rolls. All the members of the Committee concurred in the proposed changes, becoming effective in 1937. A considerable number of our hospitals and hospital firms have accepted the recommendation.

Other Items. In the year 1931 the Committee of the American Hospital Association, with the permission of the American College of Surgeons and in close cooperation with it, presented to the government specifications for standardized surgical dressings. A study

was also begun that year for standardization of surgical catgut, rubber gloves, rubber sheeting, laboratory glassware, and mattresses. This study was followed in the year 1932 by including clinical thermometers, the result of which has shown an improvement in the quality of many of the thermometers now on the market. In 1933 the Committee submitted specifications covering minimum requirements for material and workmanship of surgeons' rubber gloves. Each glove shall be marked with the manufacturer's or supplier's name or trade name, thus providing standard guarantees to hospitals for surgical gloves.

In 1935 the Committee report relative to mattresses covered twenty-one pages in the *Transactions of the American Hospital Association*. The recommendation covered the minimum requirements for inner-spring mattresses, the general requirements and detailed requirements, taking into consideration three different types of mattresses, which include hair-filled, cotton-filled, or curled-hair mattresses. Further study has been given by the Committee to hospital plumbing fixtures and hypodermic needles.

Surgical Dressings. The last hospital standardization study to be made is that of surgical dressings. Dr. Malcolm T. MacEachern, Associate Director of the American College of Surgeons, was one of the first to recognize the importance of standardization and simplification. He has served as chairman of the American Hospital Association committee and is chairman of the subcommittee concerned with the standardization of surgical dressings, a project initiated by him through the American College of Surgeons but which later was studied further and developed by the American Hospital Association committee in cooperation with other interested groups.

After considerable time and effort were given to the study of the questionnaires which were sent to 2275 hospitals, it was found that out of 629 hospitals which returned the questionnaires 296 use standard dressings, 131 do not, 149 use standard dressings and other types, and 53 did not answer this question. The Committee completed its report in 1936 and made recommendations relative to sizes.

It has been brought out very forcefully that if surgical dressings are standardized it is very important that they be used. In other words, it would be useless to standardize dressings if surgeons persist in using designs and sizes of their own specification and thereby force hospitals to provide nonstandard dressings which would cost substantially in excess of standard stock.

It can be readily seen that surgical dressings have not been generally accepted by the hospitals, either because hospital administrators have not as a whole been interested or because their administrative duties have prevented them from investigating the various sizes of dressings that are being put to use in the operating room, or it may be possible that the subject has been completely turned over to the operating room supervisor who knows little about the standardization program.

In order to secure first-hand information relative to the question why it has not been generally accepted, I had a conference with a representative of one of the manufacturers of surgical dressings, our superintendent of nurses, and our operating room supervisor. The four of us spent an afternoon discussing the standardized surgical dressing problem.

We found that if the matter of standardization is left in the hands of the operating room supervisor it is certain that she will have some complaint from the surgeons for not using the type of dressings they have been accustomed to using. Therefore, the first step will necessarily be the education of our doctors to the advantages of using standardized dressings.

I have been told that up to the present time standardization of surgical dressings has come chiefly through the manufacturers and distributors and not, primarily, through the choice of the hospital administrator. As an example, in our hospitals where we are not using ready-made dressings, our operating room supervisor received samples of ready-made dressings and she immediately changed some of the sizes of our dressings to correspond with the standardized ready-made dressings recommended by the Committee, the reason being efficiency.

Standardized surgical dressings have several advantages. First, there is a saving in the cost of purchasing either the ready-made or locally made dressings. Second, there will be a greater efficiency among the surgeons who go to one or more hospitals if the surgical committee of the hospital adopts a definite list of quantities of dressings for each type of operation. Third, it has been ascertained that the use of standardized dressings facilitates the sponge count both before and after use for the reason that it is definitely easier to count sponges which are always of the same size and shape than if there is a variety of sizes and shapes. The factor of error is thereby greatly diminished.

Every good doctor on the staff of a hospital is interested in the cost of hospitalization to the patients. Most of the doctors will readily accept the standard set up by the hospital, which will lead to greater economy and efficiency. To secure the surgeon's assistance, it will probably be best to present to the surgical committee the advantages of standardized surgical dressings. Most of them would be amazed to find that we have been using 1500 varieties of one type of dressing for practically the same purpose. Cooperation should result in an agreement to use standardized dressings. Hospitals can assume the standardized sizes gradually if there is opposition.

One way in which the subject could be impressed upon the surgeons would be to present some concrete illustration inasmuch as a visual presentation is easier to absorb than a discussion, and that would be to present a showing of the waste, inefficiency, and delay caused by not using standardized dressings.

2. Cooperative Buying for Hospitals, by *Warren L. Babcock, M.D.**

THE American Hospital Association is a grouping of hospitals with *cooperation* as its objective. In cooperative endeavor it aims to assist and present contacts with the social and industrial groups on which the hospitals are socially and economically dependent. In these contacts it must of necessity be protagonist and not antagonist.

* Adapted from *Tr. Am. Hosp. A.* 27:183-191, 1925.

Cooperative buying for hospitals, through either central purchasing agencies or inter-hospital agreements, has been a slow development in general hospitals. The cause of this retardation may be summed up in the following: (a) lack of adequate publicity; (b) local influences affecting the trustee, superintendent, or purchasing department of the hospital, favoring the local purchase of supplies; (c) opposition of the superintendent or director of the hospital who fears that cooperative buying will rob him of some of the prerogatives and influences connected thereto; and (d) opposition of manufacturers and distributors (this attitude is, of course, favorable to the middleman).

Before considering the advantages and limitations of cooperative buying, let us consider the history of the subject. The first experiment in this direction with which the writer is familiar was made by the state hospitals for the insane in New York State in 1895 and 1896. The State Commission in Lunacy, supervising twelve and later thirteen New York state hospitals with a buying power of several millions annually, arranged for the collective purchase of several items of common consumption. They perhaps initiated the slogan, "Purchase from Manufacturers Only," which principle a few years later was incorporated into the New York law as obligatory for all state charitable institutions. One of the first ventures of the state hospitals was the purchase of Chicago beef through a contract covering all state hospitals. Later this was extended to coffee, tea, and various other provision items. A few years after the initiation of this program, a central purchasing bureau was established within the State Commission in Lunacy, later known as the State Hospital Commission, for the purpose of making contracts for all the hospitals, standardization of specifications and supplies, and obtaining manufacturers' quotations. At that time the writer was in the New York state hospital service. He is cognizant of the early development in these hospitals and the success that followed.

Chronologically, the next attempt was an outgrowth of the New York City Hospital Conference, comprising most of the general hospitals of New York City. This group of hospitals initiated a central purchasing bureau in the year 1909 which has since functioned successfully under the name of Hospital Bureau of Standards and Supplies. The management of this bureau is in the hands of a committee composed of nine of the leading superintendents and directors of New York City hospitals. These hospital directors and superintendents are responsible for the conduct of the bureau. They engaged an expert as purchasing agent and have developed an organization for standardizing supplies, making contracts, supplying specifications, and furnishing quotations, that functions admirably. At the present time there are 88 hospitals throughout the country that are members of this organization, including practically all the hospitals in New York City and surrounding territory; the Hunan Yale Hospital, Changsha, China; the International Grenfell Association, St. John's, Newfoundland; St. Timothy's Hospital, Liberia, West Africa; St. Luke's Memorial Hospital, Ponce, Porto Rico; and St. Luke's International Hospital, Tokyo, Japan; as well as the Rockefeller Foundation Hospital in Peking, China, and all of the hospitals in Cleveland, Ohio, through the membership of the Cleveland Hospital Council.

These are mentioned only to show the widespread distribution of membership in this co-operative purchasing bureau.

It is known that sporadic efforts at cooperative buying for hospitals took place in a few other cities, which came to naught largely because of improper organization. A notably successful purchasing bureau was developed in connection with the Cleveland Hospital Council, the bureau having been started in the year 1918. It represents all the hospitals in Cleveland financed by the community fund, and has demonstrated that intelligent cooperation with local interests will even overcome local opposition to a great extent. It is known that the purchasing bureau of the Cleveland Hospital Council patronizes local industries and trade where possible to do so without detriment to the principle of cooperative buying. In fact, an effort is made to interest the local industries and tradespeople in providing the necessities of the hospitals on a proper competitive basis. No community, however large, can provide everything needed by hospitals. Naturally, advantage is taken of opportunities to purchase from outside manufacturers when this competition cannot be met by local industries.

In addition, reference is made to the central purchasing bureaus that have been undertaken by the community chests, funds, or community unions administering the finances of charities and allied institutions in many of our cities. That the community fund purchasing bureaus have not been a success is acknowledged, and the failure is due practically to one major cause. The community collections are dependent to a great extent on the industries and tradespeople of the community. Directly and indirectly their contributors control the fund. Naturally, they object to a program which will take part of the trade from the city. We recognize this influence as being strictly commercial and not governed by an economic, altruistic, and broadminded view of the proposition. The Cleveland Bureau, supported by community funds, was projected with courage and a full understanding of the opposition. This melted away in the face of tactful, broadminded educational work. The results are highly creditable to the economic sense and broadminded altruism of the Cleveland tradespeople concerned.

It is well known that large industrial groups, the U. S. Steel Corporation, the American Telephone and Telegraph Company, the General Electric Company, and hundreds of other industrial consolidations take advantage of cooperative buying to the nth degree. Is there a hospital superintendent or official who is so bigoted as to believe that this program is without benefit to these corporations? The benefits are not confined to financial economies. The development of standards, simplicity in construction, improvements in transportation, comparative study of product, facilities, and research, the development of expert advisers and general efficiency in production are outgrowths of these industrial bureaus. Are the hospital needs so different from general industries that our conduct of purchasing must be provincial or narrow? Is the hospital superintendent such an omnipotent and expert executive that he can do without the advice of trained bureau experts, granted that he is in a position to sense and develop the hospital's needs and specialized wants?

Before discussing the academic and theoretical advantages and disadvantages of cooperative buying, it should be stated that no practical scheme of central purchasing for hospitals contemplates taking from the hospitals their initiative in buying, their originality in developing standards, or in any way limiting control or freedom of choice. Contracts or agreements made by central purchasing bureaus are not obligatory on any hospital unless by action of the board of trustees of the hospital. Likewise, no scheme of cooperative purchasing contemplates limiting the variety or scope, character or make of medical supplies, instruments, apparatus, or technical equipment. Misunderstandings in reference to the above limitations and scope of centralized purchasing are widespread and prevalent. There is no purpose in the development of group buying to force anything down the throat of the hospital executive. Some of the oft-stated advantages and practically all the alleged disadvantages of cooperative buying are purely academic and melt away in the light of practical experience.

The charge has been made by opponents of cooperative purchasing on the part of hospitals that local groups only would benefit. The widespread distribution of the membership of the Hospital Bureau of Standards and Supplies is a direct and practical answer. The writer has conversed with representatives of the Rockefeller Foundation Hospital, Peking, China, and the Hunan Yale Hospital of Changsha, China, both of whom have assured him that distance has not militated against their successful use of the bureau. In fact, the records of the bureau have been drawn upon for complete equipment of certain departments of new hospitals in China.

After over twenty years of hospital buying, we are sure that great advantage can accrue to the buyer who will avail himself of every assistance in a field which he is not able to cover fully as an expert. Designs for new equipment, improvement in existing equipment, etc., should originate with the hospital superintendent rather than a commercial house without regard to hospital needs or application. Heretofore, it has only been necessary for some manufacturer to make an article a little different from an item in standard use in hospitals in order to sell to credulous and untrained hospital buyers. A large-sized museum could be filled with discarded articles, equipment, and paraphernalia that have been foisted on hospitals. It would be a saddening sight from an economic standpoint, although convincing and wonderfully educational.

Opponents of cooperative purchasing have charged that there has yet been no practical demonstration of importance. If any reader will take the trouble personally to verify the work of the purchasing bureau of the Cleveland Hospital Council and the Hospital Bureau of Standards and Supplies of New York City, he will be convinced of their great usefulness. In order to answer this charge, the following data are presented from the records of the Grace Hospital, Detroit, Michigan, a member of the Hospital Bureau of Standards and Supplies for over ten years.

Between 1919 and 1924, the purchases made through the bureau contracts, agreements, or quotations totalled annually from \$18,000 to \$40,000 and include no provisions except

tea, coffee, cocoa, or canned goods. The total amount of our purchases for the year 1923 was \$36,354.07 and for 1924, \$39,518.10. Roughly, this total for 1924 can be classified into the following by percentage in savings:

Average saving on pharmaceuticals and surgical dressings	12½ per cent
Provisions (tea, coffee, cocoa, and a part of our canned goods only)	7½ per cent
White enameled ware	20 to 25 per cent
On all other supplies	10 per cent
On one item (fire extinguishers), the saving was	33⅓ per cent

The bureaus, acting as jobbers, are in a position to obtain more and higher cash discounts than hospitals. These cash discounts have varied from one to 5 per cent, depending on the trade or purchase. It is interesting to note that the New York Hospital Bureau of Standards and Supplies obtained cash discounts totalling \$7275.52 from 935 manufacturers and suppliers from whom they purchased \$421,000 worth of supplies for the twelve months ending September 30, 1924. In addition to the amount of purchases and discounts from these suppliers, the bureau made provision for regular cash discounts in most of 52 new agreements or contracts. It is of further interest to note that 169 supplementary lists of prices and revision of specifications for certain articles were furnished members of the bureau and that 57 special lists of quotations and several additional notices regarding same were distributed to members, covering such staple supplies as aluminum ware, ambrine, baking powder, chair seats, cotton seed salad oil, crash towelling, crutches, crutch tips, dimity spreads, enamel ware, fibre receptacles, hospital dolls, ink, invalid chairs, laboratory glassware, laundry nets, rubber gloves, sanitary napkins, scales, syringes, needles, and uniforms. These were not contracts but usually special quotations. The 52 contracts covered staple supplies, such as absorbent cotton, alcohol, brushes, canned goods, coffee, gauze, window glass, glass bottles, sheets, pillow cases, laundry supplies, mops, etc., etc. Up to October 1, 1924, purchases by members under these agreements amounted to approximately \$4,000,000. Have the 88 hospitals, many among the largest in the country, been duped? What need for further detail?

As far as known, the general hospitals of the country never were able to purchase white enamel ware at anything but retail or hardware-store prices. Such discounts as were received were dependent on the size of the purchases. Central purchasing bureaus acting in the capacity of the middleman have been able to purchase domestic porcelain ware enameled at jobber's prices. This ware by no means is the only product that formerly could not be purchased by hospitals except from the middleman or distributor. The bureaus have been able to make arrangements for direct purchases from the manufacturers for many other items that never were obtainable except through payment of middleman's profit. The question may well be asked, "Should the nonprofitmaking, charitable institutions of this country pay distributor's or middleman's profit, particularly in view of the fact that the majority of hospitals show a deficit?" Parallel this query with the fact that the great industries of this country practically purchase all of their supplies from the manufacturers

and make no pretense of recognizing the distributor or middleman. Yet the opponents of cooperative hospital purchasing would have our struggling, nonprofitmaking institutions help support the distributor and middleman, through their receipts from the sick and through endowment income.

The benefits derived through cooperative purchasing are not wholly limited to the showing in dollars and cents. Superintendents of small hospitals lacking business training or purchasing ability should welcome any opportunity to participate in a central purchasing bureau. Many a weary hour could then be saved and many an anxious inquiry as to where certain items may be obtained could be quickly answered. The writer has been purchasing nearly one-half million dollars' worth of supplies annually for a number of years but is frequently puzzled where to look for certain specified articles or how to develop certain specifications. For example, a year ago it was necessary to refurnish a number of rooms that had been originally furnished in a style of mission furniture in fumed oak that has been obsolete for several years. After spending three months trying to locate these patterns, the Hospital Bureau of Standards and Supplies was appealed to. We were furnished illustrations, specifications, and prices in ten days. At one time recently, we were in the market for a special operating table. Local quotations were obtained which corresponded with the quotations of the manufacturers. The bureau, as a jobber, obtained the table at a saving of \$48, representing 15 per cent. Local manufacturers are favored when their figures equal or underbid bureau prices. It is the function of the bureau to help a hospital check up local supplies with approved bureau standards.

The Grace Hospital has annually paid its membership fee in the bureau from its savings on the purchase of a single commodity. Our savings in dollars and cents in 1924 on total purchases of \$39,518.10 was nearly \$5000. This by no means represents the full benefits of membership. In all calculations and estimates comparing bureau prices with local or other quotations, freight charges have been taken into consideration and added to the bureau figures. A bureau member knows that he can turn to his purchasing agent for expert advice, quotations, specifications, etc., without spending his time or that of his steward in a search that often proves futile and expensive. There are few, if any, hospitals that can afford to retain or develop a skilled buyer. Centralized purchasing secures the benefits of trained technical buying at a low administrative cost. Here the problem of supplies can be met on the basis of facts that have been assembled, checked, and standardized ready for use.

The cost of operation of centralized bureaus having a reasonable number of members is insignificant. It should be remembered that these bureaus, properly organized, are non-commercial economic organizations maintained by a group of hospitals for the purpose of saving money. No profit accrues to the bureau and the membership dues are arranged annually to cover the cost of the bureau operation only. So well has this been mastered in existing bureaus that their natural growth has taken care of the expenses from year to year without any advance over the original fees.

To be successful, any central purchasing system must be flexible and largely tintured

with common sense. The untrained hospital buyer should not be at the mercy of commercial promoters but should have an opportunity to eliminate the time element and search cost. Herein the purchasing agency is the servant and never the master, as advice and data are given with no obligation to purchase.

"Complexity" in hospital buying has been used as an argument against central purchasing. The ridiculousness of this supposition is strikingly apparent to anyone who considers the subject without bias. As a matter of fact, the *complexity* of hospital needs is one of the best arguments for cooperative purchasing.

The "trade mark" argument has also been advanced in opposition to cooperative purchasing. No one with a practical knowledge of the situation would advance this as an argument. A list of the manufacturing concerns and producers with which existing bureaus have contracts and agreements will be a roster of the leading manufacturers in their specialties. Pharmaceutical and surgical supply houses, furnishing supplies to the members of existing purchasing bureaus, are all large manufacturers and are selling their products to hospitals outside the bureaus at prices considerably in advance of the prices quoted bureau members. This is inevitable, as any manufacturer will quote a lower price on a million yards of gauze than on a thousand yards or any intermediate quantity. Most lines of hospital supplies, outside certain highly specialized laboratory or roentgen-ray equipment, are produced by competitive industries, and there is no fetish in buying a manufacturer's name or trade mark. The highest grade of products is considered in bureau agreements. A hospital with bureau membership is only availing itself of the opportunity of purchasing from the manufacturer instead of paying jobbers or distributors profit and is sure of a high-grade guaranteed product.

The bureau has provided a sufficient revolving fund so that some of the hospital accounts can be carried between the date of order and the date of payment for the goods. It is expected that the hospitals pay promptly for goods received if ordered through the bureau. It should be understood that only a part of the orders need be sent through the bureau, as most of the agreements provide for the hospitals ordering direct.

Many agreements (example, canned goods) provide two or three different grades of supplies, so that ample choice can be made by the hospital in selecting quality. In dried fruits and many other articles, all commercial sizes are quoted and the same flexibility exists in ordering as may be had in private buying.

Increased storage facilities are not necessary in cooperative purchasing. Small hospitals can participate in purchasing bureaus to equal advantage with large hospitals. The fact that small hospitals are "lacking in basic business organization for orderly purchasing, discounting of bills, storage of supplies, control and issuance," is an argument in favor of their use of centralized buying.

Hospitals have no use for poor or cheaply manufactured goods and should only buy the best grades in the market. The superintendent who does not avail himself of the advantages of competition between like products of equal quality is not serving his institution, his board of trustees, or his public. If he purchases an article held at a certain price by

trade agreements, or if he purchases a certain trade mark when it can be proved that competitors will furnish his supply at a lower figure, he is robbing his public and depriving his hospital of the full and proper use of the hospital income.

3. A History of the Hospital Bureau of Standards and Supplies, *by John H. Hayes**

THE Hospital Bureau of Standards and Supplies of New York was formed in March 1910 as a nonprofitmaking, cooperative buying organization for the benefit of voluntary hospitals. As set forth in the original organization agreement, the purpose was "To secure to the associated hospitals the advantages of cooperation in establishing uniform standards as to quality and kind of supplies ordinarily used therein, and of purchasing the same in accordance with definite specifications under continuing or other general agreements, and for the purpose of promoting the economical and efficient administration of such associated hospitals."

The founder hospitals were the New York Hospital, Presbyterian Hospital, Roosevelt Hospital, and St. Luke's Hospital, all of New York City. Within five years the organization became national in scope with members in Delaware, Michigan, New England, New Jersey, New York, Ohio, Pennsylvania, and one in China. Today its membership embraces 211 representative institutions located in 24 states and 5 foreign countries, and these institutions have a patient-day census of fifteen million per annum. In spite of having passed through a World War, the greatest depression in history, and a major recession, it has maintained 85 per cent of all the institutions which have ever become members.

It speaks well for the sagacity and foresight of the original founders to note that when the Bureau was first formed there were very few cooperative buying organizations in this country. Today there are over 10,000. Its original Board of Directors embraced such well-known names in the hospital field as George F. Clover, D.D., C. Irving Fisher, Dr. S. S. Goldwater, Charles B. Grimshaw, Dr. Thomas Howell, and Reuben O'Brien.

Its total purchases to date amount to about twenty-five millions of dollars, and the average savings which it has afforded members, as compared with nonmember institutions, have been about two and a half millions. The total cost of operation during its more than a quarter of a century's existence has been about one-fifth of the savings. When first started, dues were at the rate of \$1250 per year per member. Since then these dues have been gradually reduced so that today members in New York City pay not more than \$600 per year and all members outside New York City pay not more than \$200 per year.

During the first year or two the Bureau's activities were limited to the purchasing of about 100 items commonly used in hospitals, all of which were bought under agreements. Today it regularly handles over 2500 items, many under agreements but the majority under jobbing arrangements, and it stands ready to purchase anything which may be desired by a member institution. Its activities now include not only buying but market research, laboratory analyses, service tests, simplification and standardization, and, when necessary,

* Adapted from *Hospitals* 12:48, Aug. 1938.

legislative activity. In this last respect, it took an active part in securing exemption for voluntary institutions from the Federal National Recovery Act, the New York State Milk Law, the New York City Sales Tax, and only this year, acting on its own initiative, it secured exemption for all eleemosynary institutions from the national Robinson-Patman Act.

The Bureau's activities are financed by the dues received from the membership and a two per cent service charge which applies only to those items bought under jobbing arrangements. It is entirely nonprofitmaking and has been exempted from all national, state, and city taxes. Membership involves no compulsion to buy through the Bureau, but does ensure to the member up-to-date information on all matters pertaining to the buying situation of the institution.

Supplementary Note, October 1940

Since the foregoing was published in the August 1938 issue of *Hospitals*, bureau membership has grown to 250 institutions with an annual patient-day census of eighteen and a third million. Purchases have increased to three million dollars annually with savings of about \$400,000. Buying surveys have been made in 150 hospitals and have proved of material assistance in lowering individual supply costs. Publicity is being carried on through the medium of monthly advertisements in *Hospitals* and a monthly service bulletin, *Bureau News*.

Most important of all, in 1939 the bureau developed a definite research program with a full-time research engineer, assistants, and equipment. This department analyzes the various offerings in each line to determine the most economical, and, when necessary, develops specifications on which to base purchases. Members are furnished with technical reports setting forth the results of its studies and pointing out the pitfalls to be avoided in their purchases. When desired, consultant services by experts are arranged for. Reports on such subjects as cutting hospital fuel bills, paints, thermometers, surgical dressing materials, etc., have already been issued. Studies are now under way on syringes and needles, soaps, textiles, rubber gloves, and paper goods.—J. H. Hayes.

4. Purchasing Material for Government Hospitals, by *Carl E. McCombs, M.D.**

As far back as one can go in the history of government, the buying of goods and the letting of contracts are revealed as major sources of corruption in the use of public funds. The evils which have flowed from these sources have caused riots, revolutions, wars, even the destruction of governments themselves. The efforts of lawmakers have been unceasing to establish codes, regulations, and procedures of all kinds, placing such restrictions upon the purchasing and contracting powers of government institutions as would protect the public purse. Our "spoils system" is not alone an abuse of political power in contracting for personal service, i.e., "patronage." It is an abuse also of political power in the purchasing and contracting for what, in the vocabulary of purchasing officers, is called "matériel."

* Adapted from *Mod. Hosp.* 51:62-65, Nov. 1938.

Matériel as distinguished from personnel is defined as material equipment, apparatus, and supplies of an organization or institution.

Efficient purchasing of matériel for government hospitals, like efficient purchasing of personal service, calls for some form of central control. Purchasing in a government hospital, or any other hospital, should not be left to individual doctors, nurses, technicians, engineers, housekeepers, cooks, porters, and cleaners. That, of course, means irresponsibility, extravagance, waste, and often corrupt use of hospital funds. One does not often observe such divided responsibility for purchasing in the best voluntary hospitals or in proprietary hospitals but it is common enough in government hospitals, simply because the urge for economical and efficient use of funds has generally been less compelling.

It is more essential in government hospitals than in other hospitals that purchasing be centrally controlled and scientifically directed because hospital funds are public funds and those who have the spending of public funds are inevitably subjected to greater pressure politically and otherwise by those who have goods to sell. We know what these pressures are and how they work. One has only to read the newspapers and other periodicals or to listen to the radio to appreciate that buyers, whether as individuals or representatives of institutions, usually respond to selling arguments in direct proportion to the inducements offered by sellers and, speaking generally, without either factual determination of actual needs for the goods offered or insistence upon quality tests of their fitness for the announced purposes.

If, therefore, the arguments of sellers of hospital matériel are to be subjected to these essential tests of need and quality, the purchasing responsibility must be vested in an individual or group having, first, broad knowledge of hospital needs and purchasing techniques, and, second, authority to insist upon and apply appropriate tests of quality and efficient purchasing methods. "Unity of command" is a *sine qua non* of efficient administrative organization. Yet in hospital administrative theory and practice the principle of unity of command in purchasing is more highly honored in the breach than in the observance.

This principle applies with equal force whether the problem is purchasing for an individual hospital or for a group of hospitals. If we assume that efficient purchasing requires rigid tests of quality and fitness of goods for hospital use, then there must be some central agency qualified to test them. This agency must be one which is in a position to view the hospital service as a single entity rather than as a mere collection of special techniques. For example, a medical staff may have excellent views on what medical and surgical supplies and equipment may be desirable but the medical staff does not have either the training, experience, or responsibility to make a proper determination of what is best for the hospital as a whole with respect to the cost of the goods, the quantities that should be purchased to avoid waste and obsolescence, or the quality that economy and efficient hospital use demand. The same may be said of supplies and equipment needed for use in other branches of hospital service, such as nursing and nursing education, plant operation, and house-keeping.

In the hospital field there are many who contend that central purchasing is not well adapted to hospital administration, however well it may be adapted to the administration of other government services. They say, and rightly, that "the hospital situation is different"; that purchasing officers, because they are usually laymen, are not sufficiently familiar with hospital needs to buy wisely; that purchasing agents tend to be arbitrary and to discount the views of professional and technical experts respecting hospital needs; that there is delay in obtaining deliveries; that purchasing agents cannot satisfactorily meet hospital emergency purchasing requirements or take advantage of bargain opportunities, or conversely, that they tend to seize bargain opportunities with resulting overstocking or lowered quality of goods. These stock arguments against central purchasing are valid in many hospitals under a central purchasing plan that provides merely the form of central purchase without its administrative substance. The deficiencies of central purchasing enumerated are in fact evidence of faulty administration of the central purchasing procedure. They are not evidence that the system is not applicable to hospital aims and purposes. Precisely the same indictments are drawn against central purchasing by other professional and technical agencies of government wherever the administration of purchasing is incompetent.

Although central purchasing agencies as set up in the national, state, and local governments vary widely in organization, functions, scope of authority, and procedure, the following are generally recognized as essential to their proper administration by any government unit:

1. The standardization of matériel, that is, the adoption and enforcement of specifications of quality of goods required with due regard for the uses of the goods.
2. The purchasing or contracting for matériel in accordance with specifications and in the most advantageous market.
3. The inspection of matériel as delivered to ensure that it meets all conditions defined in the purchase order or contract.
4. Provision for proper storage and stores control of matériel so that there will be the minimum of loss through spoilage, deterioration, misuse, and theft, and at all times an inventory of matériel used and in stores.

It is obvious that the benefits of central purchasing, assuming competent administration of it, are likely to increase in direct proportion to the volume of purchases under the control of the central agency, but the principle is as applicable to small institutions as to large ones. Doubtless all hospital executives will concede that a competently organized central purchasing agency acting for a group of hospitals, thoroughly informed on hospital needs and in close touch with the hospital supply and equipment market, can purchase hospital matériel of recognized standard quality more advantageously than the same goods can be purchased by officers of the individual institutions.

As our principal problem let us attempt to adapt the central purchasing principle to the needs of a small municipal general hospital in a city not having a municipal purchasing

agency. This hospital has 100 beds or thereabouts and a total budget for current maintenance and operation of perhaps \$35,000. Of this total budget—let us say—\$20,000, or 57 per cent, is required for personal service, leaving a balance of \$15,000, or 43 per cent, for supplies, materials, equipment, repairs, and replacements. Ordinarily, in the situation assumed, the hospital administrator or the head of the municipal government department of which the hospital is a part would act as purchasing officer. In a small institution the appointment of a well-experienced, well-trained business executive to provide for purchasing and stores control under the administrator's direction would probably be regarded by the city fathers as an extravagance. What, then, can the superintendent do on his own initiative to make sure that his expenditure of \$15,000 for matériel shall contribute the utmost of benefit to the efficiency of his personnel and the welfare of his patients and shall best conserve public money for the benefit of the taxpaying supporters of the hospital?

First, the hospital administrator will inform himself fully about what the central purchasing plan is and is not. He will read, digest, and apply to his own hospital what has been written about the principles on which the plan is based; what organization and procedures are required; what is meant by standard specifications for matériel and simplification of standards; how simplified standards are developed; what scientific and practical tests of quality there are and how they may be applied to determine whether goods do or do not conform with standards; what stores control means, and how its procedures can best be adapted to his own institutional needs.

In this connection he will request the National Bureau of Standards in the U. S. Department of Commerce to furnish him with all available material on the subject. He will review carefully the reports of the committees on standards of the American Hospital Association and the reports of cities and states in which purchasing standards for hospital matériel have been adopted. The reports of the Hospital Council of Cleveland provide a great deal of valuable information on purchasing standards. As a general text on purchasing he might well study *Government Purchasing* by Russell Forbes, a recognized authority on the subject and commissioner of purchase for New York City. He will consult also the statements in *The Hospital Yearbook*. Standards of specifications for food, fuel, clothing, furniture, fixtures and household supplies, paper, rubber goods, drugs and chemicals, paints, oils, and engineering supplies are now available. There is scarcely an article of common hospital use for which standard specifications have not been set up.

When the administrator has informed himself thoroughly on what central purchasing is, he should either contract with some commercial purchasing bureau to handle his purchasing problems or set up in his own institution the organization and procedure that efficient central purchasing requires. If he chooses the latter course, he should:

1. Appoint special committees and the chairman thereof from among his medical, nursing, housekeeping, dietary, engineering, and other staffs to consider in the light of information already available the supplies, material, and equipment used by each group. Let each of these committees list the goods which in its opinion can be most advantageously bought on the basis of specifications available or for which specifications should be drawn.

Let each committee define on the basis of its own using experience the standards that seem most appropriate to its needs.

2. Assuming that records of consumption of matériel have been properly kept in the preceding twelve months of operation, each committee should estimate the probable consumption of each item of matériel that it thinks should be purchased on the basis of specifications, noting as far as possible seasonal variations in use and consumption.

3. When such lists have been prepared and the appropriate specifications set opposite each item of purchase, an executive committee on purchase should be organized, to be composed of the administrator and the chairman of each of the special committees mentioned. This committee should review all special lists and finally agree upon a general list of goods that are thereafter to be purchased by the administrator or other purchasing officer under the superintendent's direction.

4. This executive committee on purchase, having a view of the problem of purchasing as it relates to all phases of hospital service, should be a permanent committee, responsible for reexamining from time to time the specifications of items of purchase, reestimating quantities to be purchased, making such adjustments as may be necessary to meet changing market requirements, and defining, as far as possible, the conditions of purchase and delivery whether upon contract or open order.

5. The administrator should then prepare a report on recommendations relative to hospital purchasing, including the procedures to be followed, and submit it to the appropriate officer or officers of government for approval. If approval is granted, the administrator should issue for the general information of hospital staff and employees and of dealers within the hospital market area full information about the purchasing plan and the procedure to be followed. No variation from the approved procedure should be permitted without formal action by the purchasing committee and the authorization of the appropriate city authority.

6. An essential feature of a proper purchasing plan is inspection on delivery of the goods. No item of matériel which has been included in the standard approved list should be received by the hospital until it has been inspected to determine whether or not it meets the approved specifications and other conditions of the purchase order.

All goods purchased should go immediately to stores and be placed under stores control. The stores officer should inspect all deliveries and, if goods have been purchased according to standard specifications, he must see to it that these specifications have been met by the vendor. No goods should, of course, be received that do not conform to the approved standards, or concerning the delivery of which approved procedures have not been carried out, except in emergency, when formal emergency authorization of variance from approved procedure should be required.

As the procedure develops in practice, adjustments will have to be made from time to time by the executive committee. There may be difficulties in adapting the procedures to the local market; specifications may require the application of tests for which facilities are lacking. Arbitrary interpretation of procedures must be avoided. The procedure must at

all times be flexible, adaptable to hospital and community interests, and as simple as it can possibly be made.

All the benefits of economy and better adaptation of purchased matériel to hospital use may be lost through the lack of proper control of the use of goods after purchase. There should be centralized stores control and a competent system of stores accounting in order that the purchasing agency may prepare each year all the needed facts about items to be bought, units and grades and total quantities required, and the precise position of inventories. The purchasing officer, either the administrator or a designated subordinate, could doubtless act as stores officer in a small hospital such as the one here considered.

Whether there is complete central storage or decentralized storage, all stores must be under central control if waste through misuse, spoilage, or other deterioration is to be prevented. If decentralized storage is necessary, individual departmental storerooms should be required, of course, to obtain their goods upon requisition only and to furnish the stores control officer periodic reports of receipts and issuance of goods and inventories of goods on hand. Only through such a system of control and store records is it possible to determine where waste or misuse occurs.

When there is a group of hospitals in a city not having a central purchasing agency, the same procedure of organizing hospital purchasing for the group might well be followed. A central purchasing committee for the entire group should be established to determine and agree upon the purchasing plan and procedure for all. The same principle of central stores control and accounting should also be applied to all hospitals of the group regardless of methods of storing goods. If this is done and if uniform accounting procedures are adopted, it will then be possible to make proper and valuable comparison of costs in terms of use of matériel.

If there is a central purchasing agency for the city and it does not function properly in meeting hospital requirements, then hospital administrators should study their needs carefully and set up the standards of matériel that they consider essential to the hospital's purposes and the procedures best adapted to their circumstances. They should then endeavor to enlist the cooperation of the purchasing agent in bringing his general procedure into line with that which seems best for the hospital and for government agencies. Many of the complaints that are heard among hospital people of the incompetency of centralized purchasing agencies could be dealt with satisfactorily to all concerned if the hospital authorities would study their own problems more carefully, inform themselves more thoroughly on the principles and procedures of centralized purchasing, and furnish the purchasing agent with such facts as will enable him better to understand the hospital's aims, needs, and resources.

For applying tests to determine standard specifications for hospital purchases and in the inspection of goods received, laboratory facilities may at times be necessary. The laboratory facilities ordinarily available in the city health department or the hospital itself and in engineering departments of the city governments may be found useful in emergencies, but in general it is better to depend mainly upon simplified standard specifications that have been

officially adopted by the bureaus of standards set up by the National Government and the governments of many of the leading states and municipalities. Some of these standards may need modification to suit particular local conditions.

Central purchasing for government hospitals has not proceeded as rapidly as for other government services, probably because it represents so many highly specialized techniques and, frankly, because hospital administrators have unreasonably opposed it as an infringement of their prerogatives. It is unquestionably an important next step toward hospital efficiency and economy. It is particularly important now because of present economic conditions.

To sum up the advantages of scientific purchasing under central control, including stores control, it is fair to say that experience has shown that these benefits are certain:

1. Better adaptation of matériel to hospital needs and, therefore, greater benefit to patients.
2. Savings benefiting both patients and the public in original outlay for matériel and in its use, the amount of these savings being dependent in large measure upon the volume of matériel purchased and used.
3. Better education of hospital personnel in the use of matériel and therefore a more competent personnel.
4. More accurate cost accounting for hospital expenditures to the end that the administrator may more readily determine where waste, misuse, or abuse occurs.
5. Better adjustment of hospital supply requirements to seasonal variations in market conditions respecting availability, quality, and price of supplies.
6. The elimination of political and other pressures and restrictions upon the hospital purchasing authority which tend to hamper efficient and economical public service.

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CHAPTER XXIII. FOOD SERVICE

I. Administrative Problems of a Hospital Food Department, *by Ella M. Eck**

THE extent of the responsibility of the dietitian and therefore the nature of her problems depends largely upon the organization of the dietary department. The organization depends upon the superintendent or other administrative officer of the hospital. Since there is a great variety in the types of organization of dietary departments it is difficult to know just what problems are common to all dietitians. A discussion first of the various types of organizations may clarify the situation somewhat.

In reviewing the food departments of hospitals today we find many types, probably because of the comparatively recent and rapid development of that branch of the service. The oldest type is that in which we find the dietitian responsible for only special diets, which in some hospitals may mean only writing diets prescribed by the doctor with no responsibility for the manner in which those prescriptions are compounded. In most hospitals, however, the dietitian is in charge of the preparation of the special diets. In this type of department she almost never has any responsibility for the purchasing and often does not know the cost of the food she uses, for it is not accounted for separately but is included with the cost of all the food. Here we find a chef or a steward responsible for the planning, preparation, and service of the food for general diet patients and for personnel.

The next stage of development is that in which the dietitian has a partial responsibility for the general diet food for patients, possibly making the menus but having no authority over the chef or over the purchases of food. In other hospitals she may have entire responsibility for all the patients' food but none for the food for personnel. Still other hospitals give her entire charge of the preparation of food but no authority over its purchase. We even find in some that the service of food to patients may be the responsibility of the nursing department because trays are carried by employees of that department. However, the type of department most generally found in well-organized hospitals today is that in which the dietitian has entire control of the preparation and service of food to both patients and personnel. In some few the responsibility of the storeroom and purchasing has been turned over to her.

From this review it is clear that there are many different opinions regarding the proper organization of the dietary department. Perhaps it is not so much a matter of opinion as a matter of chance. In many cases there has been no planning but only adjustments from time to time of assignments to departments.

The type of organization of the dietary department and the responsibility it carries are usually not matters which the dietitian can change. She can only do her best to organize that portion of the food service given her so that it functions efficiently and economically. A dietitian who demonstrates that she can do a good job of organizing and managing

* Adapted from *Hospitals* 10:71-77, July 1936.

usually finds that gradually more and more responsibility connected with food is given to her. She may not want more responsibility—she may feel she has all she can do, perhaps more than she can do well. However, it may be easier to accept more responsibility than to be hampered by having her work spoiled after it is done, or not being able to do it as well as she might, because she does not have the proper materials at the right time. What is the use in spending time making interesting menus if they cannot be interpreted into attractive food by having the kind and the quality of raw materials she expected? Provided there has been no casualty in getting the proper supplies and the meal has been prepared to the satisfaction of the dietitian who planned it, there is still the possibility that the food may be spoiled in service. If the dietitian has no authority over the service all her care in planning and preparation may have been in vain, for the best food may be absolutely spoiled by poor or slow service. These facts—known to all of you—have been repeated to illustrate the point that more responsibility enables us to give better service. I do not mean to imply that dietitians have shirked their responsibility—in fact the reverse is true and this fact is largely responsible for the rapid growth of the dietary department from a small beginning to one of the major departments of the hospital.

Next in importance to proper organization of the food department comes the question of the amount of money which it may spend. The budget in large measure determines the standard of service which the department may give. The administrator and the board of trustees usually decide upon the budget, many times under the pressure of circumstances which they cannot control. The budget having been determined for her, the dietitian's problem is to use it to the best advantage. Within certain limits, adjustments can be made in the selection of food, in the utilization of employee's time, and in the use of supplies, which may curtail costs and cut the budget. How far this can be done without interfering with the type of service desired depends upon the level at which the budget was made. If made with a very liberal allowance for raw food, which would provide a variety of high or medium priced foods, there is an opportunity for effecting economy by substituting the less expensive items of food. If, however, the budget is made at a lower level of expenditure it is more difficult to stay within it without seriously affecting the satiety value of the diet. Menus can be made nutritionally adequate at quite a low level of expenditure; however they may be so monotonous that the capricious appetites of patients are not tempted and more food may be wasted than eaten, with the result that the patient does not receive the nourishment necessary for his recovery. In a period of generally fluctuating food prices, either the budget or the standard will fluctuate also. Which it shall be is a question for the administrator to decide since he is responsible for the finances. In order to decide it intelligently he must know what type of food and service is provided at the present level of expenditure. If the standard is to be maintained he will probably be called upon to explain the increased cost to the board; if the budget is to be held in the face of rising prices, he should be ready to support the dietitian when complaints arise because of a change in standards.

Can the dietitian influence the standards set for her department by the amount of money

allotted in the budget for food and service? That depends somewhat upon the financial situation of the hospital. During the last few years many hospital incomes have been so low that superintendents and dietitians have been helpless to do anything except use advantageously a small portion of a small income for food and service. While these years have been very hard they have also taught us a great deal, for we have been forced to analyze every item of expenditure to determine whether we were spending to the best advantage. The dietitian should be able to analyze her own department in every detail showing where existing standards of food, equipment, or service are unsatisfactory or inadequate; she should see where labor costs could be reduced, where food or supplies are being wasted or used extravagantly. She may be able to cut her budget for certain items and by this saving increase the amount for other items which are inadequately provided for. An intelligent appraisal of the entire problem with a frank acknowledgment and correction of our own mistakes if they have been made, as well as a frank criticism of the inadequacy of certain items of the budget allowance, is far better than a meek acceptance of an inadequate budget with no attempt at analysis or improvement. We may have to accept a standard which we and the superintendent know is far below what we want, but there may be no alternative. Whatever the budget, there is still the obligation to use it intelligently, economically, and efficiently.

In analyzing the department for efficiency, a logical place to start is with the layout and equipment, since these elements so vitally affect the labor cost. I do not mean that you need to start a building program and make over the hospital. Very often, however, at a small cost the use of our own space may be improved. The routing of traffic may be a cause of confusion and possibly loss of time. Improvement in this respect may not be possible of course, but it does no harm to investigate if you have not already done so. Many steps may be saved by shifting equipment, thereby saving time and avoiding fatigue of workers. Additional shelves where most needed may be the means of saving many steps. It is even possible that the buying of new equipment may save money over a period of several years, compared with using old equipment which is time consuming and expensive to operate.

It is well to check all of our operations for efficiency. The washing of dishes is one operation which is always a problem because of labor costs, breakage with expensive replacements, and the necessity for absolute cleanliness where groups of people are fed. Is our machine turning out really clean dishes? If not, is it the fault of the machine, the operator, the washing powder, or the temperature of the water? We need to set up proper standards for the washing of dishes from a sanitary standpoint, the determination of the normal amount of breakage, and of a fair cost for washing powders, not per pound but by number of dishes washed, or by some other method of measurement which considers quantity used as well as price per pound. How can we avoid drying dishes with towels and yet have them dry? Are our glasses clean not only in appearance but in reality? Is it possible or practical to concentrate all the dishwashing in one central room where it is easier to train and supervise a few operators than to have it done in a number of diet kitchens? Would

breakage be cut materially by changing methods of handling dishes? There is no more vexatious problem than that of dishwashing and if you have solved it successfully you are to be congratulated.

Another procedure which might be discussed in connection with equipment is that concerned with such finished products as ice cream or bread. If you buy your ice cream it might be well to investigate the possibility of making it instead. This would involve an outlay of capital for a freezer but if the quantity consumed in a year and the saving per gallon is considerable it might be a profitable investment. The counter type of freezer and commercial ice cream mix make the manufacture of ice cream very easy. There is a great deal of time saved in comparison with the use of the older types of freezers and also a saving in power if the old freezer was connected with the house refrigeration system. The resulting product is usually more satisfactory and much cheaper than commercial ice cream.

Bread is another item which some hospitals have preferred to make, finding it cheaper and better than the commercial item. This involves more equipment than ice cream making, but possibly not more expense for equipment if one has an oven. Here again the saving would depend upon the quantity used and the saving per pound. Since in our hospital we make our own rolls and therefore use less bread, there would not be sufficient saving to be worth while. However, I know of one Chicago hospital which has made a saving by baking its own bread.

The layout and the equipment have much to do with the planning of our menus for the different groups in the hospital. We may have one large kitchen where all the cooking for all groups is done or the work may be divided among several kitchens. A duplication of equipment may be avoided by having one central kitchen. It may even be possible to have some of the cooking or baking done by a night crew or a night cook, thereby increasing the amount of food produced without increasing the amount of equipment. The tendency today is toward centralization of operation to avoid duplication of equipment and labor as far as possible.

Every dietitian needs to have clearly in mind the classification of the group she is serving from the standpoint of the quality of food and the type of service she is to give to each. Patients are usually classified upon the basis of the accommodations for which they are paying, those in semiprivate rooms paying more than ward patients and private room patients paying the highest rates. Whether it is possible to provide a different type of food for each of these classifications depends mainly upon the layout of the hospital and the facilities provided for serving each group. If patients in semiprivate rooms and wards are served from the same unit kitchen it may not be possible to provide a different type of food for each group. The difference in the price of the semiprivate room may not be enough to justify additional cost for the food. If semiprivate patients are on a separate floor which has its own service kitchen or can be easily served a different type of food if central service is the method employed, it may be possible to provide a better quality of food for these pa-

tients. The layout usually provides space and facilities for adequate service to private patients. The proportion of patients of each classification in relation to the total number is also a factor which affects purchasing, preparation, and service.

This division into groups applies also to the personnel. Many hospitals provide separate dining rooms and possibly separate kitchens for the administrative officers, the doctors, the supervisors in various departments, the student nurses, the clerical employees, and the domestic employees. The number of groups and the difference in the cost of food and the service provided for each one must be taken into consideration in purchasing and preparing food and in the labor cost. Possibly a fairly liberal budget for raw food may reduce the number of groups since the food for the average group will need less modification to be acceptable to other groups than if planned on a lower level of cost. This matter of classification and cost of food for various groups is also a matter of policy often decided by the administrator, who leaves the working out of details to the dietitian. However, he must depend upon the dietitian for accurate cost figures in order to make a decision.

Before leaving this question of classification, however, I should like to call attention to the effect which it has upon the daily food cost. Every dietitian has had the experience of having her costs compared with that of other hospitals. Many other factors enter into the food cost, of course, but the proportion of the low and the high cost groups to the total is one factor which is not always taken into consideration. A large proportion of ward patients and domestic employees will of course reduce the average per capita cost greatly even though we have small groups of other classifications receiving very expensive food.

Having determined the classifications of the group served, the approximate cost allowed, and the number to be fed in each classification, the dietitian is ready to proceed with the purchasing and the menu-making. To my mind purchasing and menu-making are so closely related that it is impossible to separate them in either discussion or operation, particularly if we wish to effect maximum economy. However, since we must have a starting point, the principles of menu-making will be emphasized first and methods of purchasing will be discussed later.

From the standpoint of the hospital dietitian nutritional adequacy is the major consideration. The popular idea of the logical application of a dietitian's knowledge of foods is in the field of special diet. But not all patients in the hospital need special diets. They all *do* need food which is adequate in all respects. However, since the average patient usually is in the hospital for a period not to exceed a few weeks, his general health might not be impaired if the diet were not entirely adequate. The employee, on the other hand, receives his food from the hospital over a period of years. If the diet for this group is not nutritionally adequate, the institution will suffer loss through the decreased efficiency and increased illness of its employees. So in addition to the humanitarian reason for improving the general health of our employees through proper food, we have the financial consideration as well.

But planning a menu dietetically adequate does not mean that it will be eaten. We dietitians have been accused of feeding calories rather than food, and hospital food generally

does not have a good reputation. Food people who have had to sell their food quickly realize that it will not sell if it does not look attractive, and if the taste has not borne out the promise of its appearance the customer goes elsewhere for his next meal. That sort of experience makes us alert to the value of using color in planning meals, of combining different flavors, of using new food combinations and all the other means our ingenuity can devise to make our food more attractive. We have the added difficulty of feeding the same group, which will become tired of the same type of food no matter how good after months and perhaps years. So this matter of providing attractive, appetizing food on a limited budget for a hospital group requires all our skill and imagination.

Closely connected with the menu-making is the matter of buying our raw supplies. The intelligent purchasing of food requires a knowledge of the nature of food products, the regions of production, the methods of handling, packing, and distributing different varieties and the qualities and best use of each, and a knowledge of grades and specifications. To know what is available and its price is essential but more knowledge is required if we are to get the most our money can buy.

Many staple articles of food have been sufficiently standardized so that they can be safely purchased from a reliable firm on specification. It is well, however, to make sure by inspection of products that that particular brand is the grade best suited to your use, and that it is delivered as specified. By competitive bidding from several firms on such items it is usually possible to obtain a better price for the quality desired. Attention must be paid to fluctuating market prices on these items since it is often possible to put in a larger supply at a saving when the price is advancing. The reasons for the advance in price must be carefully studied to avoid speculation and a possible loss. On this type of product, a knowledge of the qualities of the raw product, the process of manufacture, the length of time the item may be safely stored, whether temperature or dampness has any effect upon its keeping qualities, are necessary to ensure that the proper quality and amount are purchased. On many items kitchen tests are of great assistance in deciding which products may be the best to buy. I cannot emphasize too strongly the importance of the follow-up work of our purchases in the kitchen.

The buying of canned goods is very important because of the large amount of money involved, and the necessity that the product be satisfactory and suited to the use for which it is intended. Only the menu-maker knows which grade can be most economically and satisfactorily used for her purpose, and which count is the best for various uses. She knows, too, that grades vary and what is called fancy by one firm may be graded as choice by another. The best method is to cut samples and compare color, flavor, pack or drained weight, degree of syrup, and, where important, consistency and count. By keeping a record of these scores they serve as a handy reference during the year, and comparing them year by year, a very good idea is gained regarding the standards of firms and what you may expect to find under a certain label. Buying on contract is often very advantageous particularly if firms will guarantee against a decline in price. Certainly there is no question of the economical advantage in buying by contract on a rising market provided we are sure it is

definitely rising. When the market drops, it is a very short-sighted firm which will not meet competition and lower the contract price with the market. The amount of storeroom space provided often decides the manner of buying particularly such items as canned goods. If there is sufficient storeroom space, purchases may be made directly from canners provided the amount is large enough. On certain items, a saving may be made by buying a large amount and paying storage charges. Wholesale grocery firms will contract on many items, particularly canned goods, to be delivered as ordered up to a certain date. For the hospital with limited storage facilities this is probably the best plan.

The purchasing of perishables such as meat and fresh fruits and vegetables presents a more complicated problem. Here too we find a distinct advantage in competitive bidding but because of the difficulty of standardization, rigid inspection of each order is necessary to be sure that the quality paid for has been delivered. Because of the ease with which inferior quality may be substituted, some buyers feel that competitive bidding is dangerous and prefer to pay a larger price to avoid the danger of receiving a poorer quality. This method does not ensure delivery of the desired quality and does not justify lack of inspection of deliveries.

In the buying of meat most hospitals buy by the half or the quarter rather than buying wholesale cuts. This is based upon the theory that it is more economical. For the large hospital feeding a large number of ward patients and domestic employees, so that the using up of cheap cuts is not a problem, this method is probably cheaper in the long run. For the smaller hospital however, and the hospital with a smaller proportion of ward patients, the buying of wholesale cuts may be a better plan. Offsetting the higher price paid per pound is the saving of the butcher's salary, or at any rate, the cost of the labor of cutting meat. Steaks and chops may be more uniformly cut and give a better yield per pound because the meat market is equipped with machinery for that purpose, which is not often found in any but a very large hospital. Since the proportion of cheap cuts is greater than the proportion of choice cuts in the animal, a great deal of meat may have to be purchased to provide the necessary amount of rib roast or steak for a certain group. It requires very careful supervision and planning to use all of this while it is still fresh. We compare the high cost of steaks and ribs purchased by the cut with the same price by the quarter, forgetting that the heavy bones, shanks, and fat are being paid for at a higher price in the quarter than if purchased as bones and shanks. This method of buying also enables us to calculate our cost of meat for certain groups more accurately and to allocate the correct proportion of the cost to the group using it. Since meat is probably the most expensive single item of food used, knowing the exact cost is more important.

The fruits and vegetables have assumed a new importance in the diet in the last few years, due to the increased knowledge of the effect of vitamins and minerals upon our health and well being. Their importance is further increased by their aesthetic value in the diet. The color which is so essential in appealing to the eye comes largely from this group of foods. Their flavor and the elements of freshness and contrast with which they supplement the more bland foods make them indispensable to the menu-maker. Since these

foods also take a large portion of the budget, the method of purchasing is most important. To serve most fresh vegetables at their best they should be harvested at exactly the right stage of development and eaten as soon as possible thereafter. Holding even in refrigerator cars in many cases causes a loss of flavor while the appearance is still good. Green peas, corn, and asparagus are particularly susceptible to change of flavor due to holding. This fact emphasizes the importance of a knowledge of production regions and the seasons of products from these regions. Knowing the time when we may expect the peak of production of various vegetables is also essential, since they are cheapest during that time and may be used more freely on the menus.

Certain varieties of fruits are available at certain times of the year and are suited to different uses. This knowledge, together with first-hand information regarding local market conditions and prices, should enable the dietitian to make menus and purchase intelligently.

I hope this discussion has proved my point that menu-making and purchasing are closely related and neither can be done with great satisfaction and economy unless considered in relation to the other. Our kitchen preparation is tied up in the same way with purchasing. A comparison of the cost per gross pound may be very misleading in many items, while the comparison of the cost per cooked pound may give the true comparison of value. A piece of corned beef or a ham costing a few cents more may shrink less in cooking and give a lower cost per cooked pound and therefore a better yield. This is true not only of meats but of other items as well. There is a great field for experimentation in institution kitchens in the matter of yields and costs. Perhaps the fact that we have done more of our institution accounting on the basis of raw food rather than cooked food is responsible for our lack of data along this line. The necessity of accounting for the cost of cooked food opens up many possibilities which we in institutions have never considered or investigated. It necessitates a knowledge of what goes into our food in the process of cooking. No one who has not tried to standardize recipes has any idea of the work involved in finding out accurately just what was used in making a certain dish and then holding the cooks to making it just that way thereafter. If you have a good cook in your kitchen, that is a good place to start—put her recipes on paper and cost them. Using them will improve the products of mediocre cooks and you will have valuable data on the cost of your cooked food. Too often we find that methods and recipes are determined by the cooks rather than by the dietitian. If we have a good cook the food is good, if a poor cook the food is poor, even though the menus and the raw materials are the same. Standardized recipes, if conscientiously followed, will provide food more nearly of a uniform quality. They also help to control costs, for the materials which go into the food have been specified and are not left to the whim of the cook. I know a successful food woman who has built up a very nice business on one meal a day in a location where several other people have failed because she serves a home cooked type of food at a moderate cost. She trains her own cooks, for she says that is the only way she can be sure it will be done just as she wants it, and will be always of a uniform quality. Her patrons come back every day and say it is more like a club than a res-

restaurant. Her kitchen is small, her equipment inadequate, the dining room rather noisy, the quality of raw materials good but not fancy—yet she serves good food which brings people back year in and year out. She does it by using her own recipes and seeing that they are always followed. There are so many advantages derived from intensive work with the cooks in the kitchen that I think most hospitals would profit by expanding the staff sufficiently to make it possible. Close supervision in the kitchen may cut costs also by closer ordering, thus avoiding much left-over food, and by better use of unavoidable left-overs.

It seems hardly necessary to speak about the importance of proper storeroom routine. This consists of checking the stock through periodical inventories and ordering by requisition not only for the purpose of seeing that supplies are being sent to the right place to be used but also as a record and aid in accounting. A perpetual inventory file is an invaluable aid to both the administrator and the dietitian. It gives not only a purchase record but a disbursement record and is a valuable check on the physical inventory. It assists in detecting errors since we can check on the amount of each particular item purchased, disbursed, and left in stock. Checking the value of the stock does not always disclose errors, since they may occur as both debits and credits and thus cancel each other. In purchasing, it is necessary to know the amounts of various items used during the year as well as the amount on hand. I have spent many hours of my own time checking purchase orders and requisitions to find out how much we had used during the past year of each item of canned goods, in order to know how much to buy for the coming years. That knowledge is absolutely necessary as a basis for purchasing and with a perpetual inventory it is ready at any time it is needed. If an advantageous price is offered on an item, the file gives immediately the amount on hand, which you must know before deciding whether to buy and, if so, how much to buy. The use of a perpetual inventory is not confined to a large hospital but is equally valuable and necessary in a small one.

Strange as it may seem, many hospitals do their accounting of monthly costs without a storeroom inventory. The inaccuracy of such accounts is apparent when we consider the variation there may be in the value of the inventory of even a small storeroom. Even kitchen inventories vary enough to make some difference in the monthly cost if not taken into consideration.

Many times we cannot see the value of certain procedures until they have been forced upon us and carried out through necessity. Food cost accounting is one procedure which involves so much detail that I doubt whether many dietitians will undertake it voluntarily unless they realize what a valuable tool it is in control of costs. I have had experienced dietitians in my own department rebel at the amount of detail and careful checking necessary. These dietitians were used to the accounting by raw food cost only, most of which was done in the business office, and failed to see the value of more detailed accounting. While it is not applicable to all hospital food departments, I should like to describe the accounting system used in our hospital, and point out some of the advantages we feel we have derived from it.

There are four accounts to which all the cost of food is allocated. For the raw food de-

livered from the storeroom this is very easy since the requisitions indicate which accounts used the supplies. Since all the food is cooked in one kitchen, the pricing of the cooked food is necessary in order to charge it out correctly to each account. The costing of meat is simplified by the fact that it is purchased as wholesale cuts. Gross and net weights for all raw meats are recorded in the storeroom. Raw weights and cooked weights recorded by the cooks in the kitchen make it possible to calculate the cost per cooked pound. This is necessary because unused meats are credited back and charged out later to the account using them. Cooked vegetables are handled in much the same way by recording the yield of the number of bushels used and calculating the price per quart or per serving as needed. By calculating at the actual price paid day by day instead of an average price a more nearly accurate cost is obtained.

For more complicated mixtures standardized recipes are used. These are calculated to yield the number of servings most often used and one which can be easily multiplied for a larger number as 25 or 50. It is amazing how widely the cost of a single dish will vary when made by different cooks. Standardizing the recipe gives an opportunity not only to control the cost but to specify the proper method of combining and to produce a finished product with the proper appearance and flavor.

Recipes must be repriced frequently enough to keep them in line with current prices. When prices fluctuate widely over a short period of time, it is difficult to do this, but since it is largely a matter of changing figures, we have found we can teach a clerk to do it. While a great deal of time and detail is involved, we feel that this method has enabled us to hold our cooked food to a uniform standard and has aided greatly in controlling costs.

Before leaving the subject of hospital food, I should like to say a word about comparing food costs of various hospitals. While every administrator must know that costs are affected by the standards maintained, the layout of the hospital, the type of service rendered, the local market prices, the limitation of storage facilities, the proportion of private patients and expensive special diets, the dilution of the cost by a large number of ward patients or domestic employees, to mention only a few of many factors, he still expects a dietitian to explain why her costs are higher than those in a hospital a thousand miles away whose system of accounting is unknown. It seems to me that we shall have to do a great deal of standardizing of hospitals and accounting systems before the comparison of costs produces anything except confusion and uncertainty. Investigation of the organization and procedure in our own hospitals will be more productive of information regarding food costs and whether they are justified by the standards maintained and the service rendered.

2. Classification of Food Service; Application to Different Types of Hospitals with Limitations or Advantages, *by S. Margaret Gillam**

THE type of food service in a hospital is mechanically affected by the architect's general plan of building construction. It is seldom that the building is planned with the food preparation and transportation as the prime points of interest. Therefore, any ideal arrange-

* Adapted from *Tr. Am. Hosp. A.* 33:204-206, 1931.

ment is modified by the consideration of other services to be rendered, and in the end we have a composite with each department in the hospital obtaining the best possible plan with necessary sacrifices.

From a mechanistic point of view there are two types of food service for patients in general use in hospitals: (1) centralized food service, sometimes spoken of as the vertical type; and (2) decentralized food service, or horizontal.

Centralized food service may be defined as the type whereby individual trays are served in a unit usually in numbers over 50 and transported by trayveyors, dumb-waiters, or tray trucks to patients located on several different floors. This central food service travels vertically from the main kitchen or from a service room adjacent, or from several serving rooms to which food has been transported in bulk from the main kitchen. It is to be remembered that the food always passes by vertical transportation to several floors. From any one unit 80 to 100 trays is the most satisfactory number to serve. However, there are hospitals serving from the general kitchen 300 to 500 trays. In this quantity the layout must be efficient and the transportation rapid. Serving these large numbers the operators have been inclined to deviate from the original plan and add cold foods from the floor food stations. One hospital is using the plan of a tray truck with a warm and cold compartment, the food being sent on two trays and assembled as served.

Centralized food service, as previously stated, is the most effective type when service units are planned for not more than 100 trays, and the equipment in these units is adequate for the preparation of foods which are better when served directly from stove to tray. This type of service is more satisfactory when the authority of not only the tray service but the control of trays extends to the patient's room; too often this system has failed because trays have not been served immediately upon arrival at the floor. Centralized food service is desirable for all small hospitals of 100 to 200 beds where vertical transportation can be installed. It is recommended for hospitals of 300 to 500 beds which are built on the unit system of not more than 100 beds each, with the consideration that each unit kitchen is well equipped. However, one well-known hospital built on this type has given up the centralized service because of complaints of cold food due to cooling in drafty dumb-waiters.

The advantages are better supervision, more uniform trays, no reheating of food, no food odors, centralization of dishwashing which takes this noise from the floor near the patients; variations in trays are easily taken care of according to the patient's requirements and wishes, there is a lack of waste by having fewer service stations, and mistakes in diet are rare due to the efficient system of checking.

Decentralized service has many variations but in general it is a plan whereby the food is transported in bulk to floor food stations and there served from the food truck or steam table to individual trays and transported horizontally to patients. From 10 to 80 trays may be served from the food truck or steam table in any one station or ward pantry. In large institutions of all types this has proved the most satisfactory system, since there can be any number of multiples of one, and all food can be prepared in one central unit.

With the insulated or electric food trucks, which are excellent for maintaining the tem-

perature of foods, and now with the construction of suitable containers in the trucks for various types of food, the decentralized service is gaining in popularity. Foods for the modification of diets may be sent up on the truck with foods for the general menu, and the special diet trays can be served very efficiently. Second orders of food are easily obtained. Because of the smaller units and the close proximity of the server to the patient, usually there is a more personal touch given each tray. It is assured that the hot food will reach the patient hot and cold foods will be cold because of the short interval between the serving of the tray and the time it reaches the patient. In some hospitals weighed diets are served by having the scales for weighing on the food truck. The period of service throughout the building is not usually over 10 to 20 minutes. Because of the small units with less congestion and short transportation there is less dish breakage. It might be added that with this system food service can go on simultaneously throughout the hospital and there is practically no confusion.

I have given the two types of service under which all food service may be classified. The advantages of each have been pointed out with the idea that the limitations and weaknesses of each type might be more apparent.

In recent years the tendency of the medical profession toward simplicity of diets and the desire of the dietitian to give more individual attention to each patient have resulted in the transfer of the preparation of special foods to modify the general diet to the main kitchen. Patients on special diets are happier and their food is more palatable because it is prepared by expert cooks rather than by an inexperienced nurse who has spent one or two weeks in the diet kitchen. The student nurse is relieved to give her time to more careful planning and serving of the diet and to give personal attention to the patient. This system works out equally well with centralized or decentralized service. In the decentralized service food trucks are so constructed as to make possible the transportation of many and varied orders to the ward pantries. In centralized service the food can be prepared and served directly on the trays. Hospitals now being built, I believe, would make a mistake to give over a separate space to the preparation of foods for special diets. As previously stated, in some hospitals weighed diets are being cared for in much the same manner.

The selective diet for patients should have more consideration, and I feel it is worth its trial in every institution. At first it may be used for a small group, and if successful it can be gradually adopted. It is especially useful for convalescent patients or tuberculosis cases that remain in the hospital a comparatively long time. This selective service is working out most successfully at the present time in a children's hospital.

Food service for personnel is usually classed as cafeteria or table service. Cafeteria service is usually advocated for employees and sometimes for nurses. In institutions with a large number of ambulatory cases we have read of the successful operation of cafeterias for these patients. Only when hospitals begin to organize their food service for personnel on a commercial basis will there be a value-received attitude for the expenditure. To be able to spend cash for food promotes a much more respectful attitude toward the whole situation.

To have successful food service whether for patients or personnel there must be no break in the line of control. The type or method of food service for patients, whether centralized or decentralized, is of no significant importance except as it affects the quality of service. I believe either plan works satisfactorily when efficiently laid out and properly directed and carried on by well-trained personnel who are sympathetic with the systems.

3. Special Diets, by *Joseph C. Doane, M.D.**

MUCH has been said about the hospital dietary. From the angle of the administrator this discussion has largely centered about ways and means of saving money. It has concerned itself with the wisdom of purchasing futures and of cooperative buying. The most efficient methods of storage, distribution, and conservation have likewise been freely discussed. All these matters are of the utmost importance, particularly since from twenty to thirty cents of each hospital dollar are spent on the purchase, preparation, and serving of food.

Dietetic departments of hospital magazines have from time to time departed somewhat from the purely economic aspects and have discussed the therapeutic values of foods. Perhaps this phase of institutional dietetics does not receive sufficient consideration from either physicians or executives.

As knowledge of metabolism increases, the role of a properly planned dietary in the treatment of disease becomes more important. But the doctor and the dietitian are still too far apart, both physically and scientifically. The physician is often seen in the clinical laboratory discussing his problems with the director. The x-ray, physiotherapy, electrocardiograph, and other specialty departments frequently enjoy his presence. But rarely if ever does the doctor find his way to the special diet kitchen and still more rarely is the dietitian called to the patient's bedside to consult with the doctor as to the most effective methods of meeting the patient's dietetic needs. Nevertheless, the development of metabolic departments in an ever increasing number of general hospitals is an encouraging sign, although medical schools still persist in ignoring the importance of dietetics in their curricula.

Within the last two decades a great number of self-styled food scientists have sprung up who are willing for a consideration to outline diets for any condition known or unknown to science. Their writings consume volumes and their preachings reverberate from one end of the land to the other. Filled as these so-called lectures are with inaccuracies and deliberate falsehoods, a gullible public is led to believe that all disease can be prevented or cured by proper diet and that the human mechanism lives or dies when the litmus paper turns red or blue. The medically ignorant person is informed that his system is "full of acid" and all aches and pains are thus explained. Appendicitis, tonsillitis, indigestion, and scarlet fever, according to these pitifully ignorant or deliberately vicious persons, can be cured or prevented by the proper food. Citrus fruits seem to be the cure-all. Great harm

* Adapted from Special diets; methods of ordering, transporting, and serving them, *Mod. Hosp.* 42:83-86, May 1934.

may result from these false preachments since unsound and quackish dietary tampering may bring about serious metabolic or gastro-intestinal disturbances.

Perhaps one reason for the flourishing of these false prophets is that physicians pay too little attention to the potentialities of properly regulated diet in the treatment of disease. The doctor is often too casual or too indefinite in giving dietetic instructions. In addition, the lay public is fond of being "put on a diet." It makes little difference in many instances what the diet is. Nevertheless, the fact remains that little standardization exists as to the type of food best suited for the treatment of each kind of disease. For example, a patient recently complained that he had visited five physicians and had in his pocket as a result as many different types of diets. Later, disconcerted and somewhat disgusted, he listened to a lecture by a food faddist and came away with his hands full of carefully prepared dietetic cards and instructions.

To other patients special diets simply represent a compilation of the articles of which they are fond with instructions to consume them no more. The scoffers choose to believe that such a diet is prepared by the physician by first learning what food the patient enjoys and then forbidding it. The psychology of food likes and dislikes is as ill understood as it is interesting. Food phobias are extremely common. It is not an infrequent occurrence to discover a patient, anemic and half starved, who because of a fear of ingesting a certain food that he is convinced will disagree with him, has consumed hardly enough food to maintain life. Nevertheless, medical literature is replete with instances in which a definite food sensitivity or allergy certainly existed. Eczema, asthma, migraine, arthritis, bronchitis, and urticaria have all been found to result from hypersensitivity and, in turn, have been relieved when the causative agent was withdrawn.

The hospital's sins of omission and commission in regard to things dietetic are numerous. The patient is frequently aghast at the type of food served him. Not understanding that a variation from previous diets is made deliberately, he is inclined to conclude that this departure represents an inexcusable blunder on the part of either the hospital or the physician. The hospital patient is notoriously difficult to please because his gastro-intestinal system is disorganized or diseased and because frequently he has a long list of food phobias that have been developed either from personal experience or from confusion following contact with and advice from many doctors. Hence a course of food re-education is often necessary during his hospital stay. Too frequently, however, the hospital patient has no opportunity to narrate his food experiences, and he is served milk or asparagus or stewed prunes or fish or strawberries, to which he knows he is sensitive. The senseless phobia as to the disease-producing possibilities of food acids and alkalies is still frequently met. It may be said, however, that throughout all this tangle of real or imagined personal reactions to food run a few threads of fact.

Incidentally nothing in the human economy is more steadfast than the degree of alkalinity (expressed as blood P_H) of the blood stream. Hence the contempt in which informed persons hold certain faddists who contend that blood alkalinity is seriously affected

by an excess of acid-producing foods in a meal or that carbohydrates and proteins may not be mixed. There is more sense in the contention of the faddist that intestinal elimination is largely affected by the quantity and texture of foods and yet this teaching is not without elements of danger.

It is feared that some of these unscientific theories as to the reaction of the human body to certain types of food have crept into special dietaries. It is certain that the large list of special diets found in most hospitals could in many instances be reduced without working harm to the patient. Equally certain is the fact that many visiting physicians delegate the prescribing of the diet to their house officers, thus implying that the consideration of food is somewhat secondary and insignificant in the treatment of disease.

Many hospital executives, therefore, thoughtlessly conclude that to give the patient good food, a modicum of instruction, and a list of articles allowed when he departs for home is to fulfill the institution's duty. In these institutions one often observes a staff not interested in dietetics, a dietitian who is more a cook than a therapist, or a policy embodying the hotel idea of simply feeding people. To be sure, it is important to please and a salt-free diet certainly would not be ordered by the patient through preference. There is a crying need for more health education in regard to food and for translation into the language and economic possibilities of the family the scientific needs of the patient as discovered during the period of his hospital stay.

It may be said that much good would often result from a rather thorough overhauling of routine liquid, soft, house, and light diets in the average hospital. As interest in and information concerning metabolism increase, the number of special diets ordered likewise grows. This is a natural development but it may be much overdone. In one medical ward service, for example, 75 per cent of the diets served were of the special type. These varied all the way from weighed diabetic to high caloric, salt-free, gall bladder, anemia, and nephritis diets.

Most institutions have found it necessary to establish special kitchens for preparation of this type of food. Often a special dietitian is placed in charge and the efficiency and economy in the conduct of this special activity largely depend upon her scientific accuracy, the prevalence of the hotel idea, and the zeal and understanding of the medical staff. The value to the patient of such a kitchen also depends on the accuracy of the physician's dietetic prescriptions as well as on the care exercised by the dietitian in preparing food. Improper transportation and serving methods may, of course, destroy the value of even the most carefully prepared diet.

Much waste results when meticulously prepared special diets are not eaten by the patient for whom they were intended or when he is allowed to consume what he likes and to barter what is left for some other article of food served to a near-by patient friend. Special diets are expensive; if they are unnecessary, poorly planned, continued too long, or ordered as merit concessions to deserving patients rather than as a medicine, they may result in considerable loss to the hospital. Moreover, the physician who accedes to the request of a ward patient or his relative and orders special food so that the patient may enjoy delicacies

not required in the treatment of disease is following a policy that cannot be too strongly condemned.

Inspection of hospital charts often reveals inaccuracy and indefiniteness in ordering diets. Sometimes this condition results from errors on the part of both the physician and the dietitian. Moreover, there are certain basic facts that the physician must convey to the dietitian. A few examples of this type of information are set down purely for illustrative purposes. In the nephritis diet the number of calories, the amount of protein (40 gms. usually being considered as a minimum), the amount of salt, and the amount of fluid are points of information that the dietitian must have in order to prepare the diet intelligently. In the diabetic, reduction, high caloric, and purine-free diets, the amount of carbohydrates, protein, and fat is usually given.

Food requirements vary with age, sex, weight, and surface area, the last being perhaps of greatest importance. Since the determination of surface area is somewhat difficult it is usually believed to be sufficiently accurate to employ the standard tables of caloric requirements per kilogram of body weight in computing the total diet needs. These requirements are roughly:

At rest	25 to 30 calories per kilogram (2.2 lbs.)
At light work	35 to 40 calories per kilogram
At moderate work	40 to 45 calories per kilogram
At hard work	45 to 60 calories per kilogram

Most food requirement tables state that children from six to sixteen need approximately 50 to 90 per cent of the food needed by an adult male at moderate activity.

The dietitian may be informed concerning these basic facts and yet it is necessary for the food prescription which originates in the ward to contain still further information. The physician in computing his prescription must take into consideration the kind of foodstuffs that must be consumed—the vehicles for his calories and chemicals. For example, a minimum of 0.68 to a maximum of 2 gms. per kilogram of protein must be taken. Carbohydrates in the absence of diabetes may range from 125 to 400 gms. a day. Fat requirements are from 70 to 100 or more gms. a day. Other requirements include: calcium, from 0.68 to 2 gms.; iron, .015 gm.; phosphorus, 1.5 gms.; chlorine, usually in combination with sodium, 2 gms.; and water 1000 to 6000 cc. (five to ten glasses) daily. No matter how routinized the special-diet ordering of a hospital may be, the mere designation of the type of diet required without further individualization is insufficient information for the dietitian if she is to be of greatest service to the patient. In the treatment of anemia, for example, merely to order a diet rich in green vegetables, glandular tissues, and iron is to entrust to the dietitian too great a responsibility from a therapeutic standpoint.

The foregoing statements indicate not only the type and amount of information which the physician must supply to the dietitian, but also some of the basic chemical facts in regard to food which the doctor must possess in order to prescribe intelligently to the diet specialist.

The dietitian must be well trained and informed in regard to food chemistry and it is advisable for her to know the patient for whom she is preparing a diet. The number of grams of protein, fat, or carbohydrate ordered is of much less interest to the patient than the foods in which they are contained. The dietitian may serve protein to him in many forms, some acceptable and others objectionable. The ideal prescription is one in which properly proportioned ingredients for the treatment of disease are contained in articles pleasing to the patient's palate. The dietitian should come to know the patient through personal contact and by this method should learn his food likes and dislikes. She should also meet the physician often in order that she may receive assistance and advice in her effort to help him solve his patient's food problems.

Too often the hospital superintendent regards the column containing food costs without appreciating either that he is not conducting a hotel or that food is often as valuable a therapeutic agent as are the contents of the bottles in the drug store.

The methods employed in imparting food instruction to patients undergoing treatment or to those who have been discharged and are returning to the dispensary for care are of much importance to the community at large. It matters little, for example, how intensive are the study and treatment of a nephritis patient during his hospital stay if no attempt is made to prepare him for the time when he will be discharged from the institution, when his diet will be prepared by persons little informed concerning food chemistry. In some hospitals regular classes are conducted by the dietitian or her representative for patients for whom special foods have been prepared. Members of patients' families are sometimes invited to these demonstrations and their presence there is perhaps of greater importance than that of the patient himself.

Little instruction has been given persons who have been receiving assistance from federal or other governmental funds. To endeavor to teach them methods of preparing expensive diets would be sheer folly. Most hospitals fail in their efforts to translate dietetic information into the language of the ward patient. To speak of calories and grams is to use a language entirely foreign to the average patient. Measurements used in the average kitchen—cupfuls and teaspoonfuls—are terms that the patient and his family understand.

Even though apparently adequate instruction has been given to the patient before discharge, a return to the food clinic is of much importance. A dietary that seems to be understood and to be wholly practicable is likely to lose most of its scientific usefulness after some time of experimentation at home because the patient becomes discouraged or disgusted in routinely following it. Establishment of food clinics for the information and instruction not only of those who have been under treatment in the hospital but also of those who are visiting the dispensary seems to be a necessary provision by the hospital. Definite and carefully prepared instruction cards—translated into several languages, for distribution in the foreign sections of a city—are useful in imparting food information. For the intern to warn the departing patient to avoid bread, meats, and salt is a highly inefficient method of instructing the public.

The organization of such out-patient service requires certain inexpensive equipment

and the fullest cooperation between the staff and the dietitian. At this clinic practical demonstrations of methods of preparing specific diets should be made. The most capable member of the class can be selected to prepare the dish of the day and members can be encouraged to attend this clinic by allowing them to consume the foods thus prepared. When there is an insufficient number of patients for whom the same diet has been ordered, instruction must be more of an individual matter. This will not be the case in the diabetic food clinic since it is always possible to gather together a goodly group.

A careful cooperation among the members of the dietetic staff, the physician, the nurse, and the hospital superintendent is essential to an efficient special diet service. Carelessness or indifference on the part of any is likely to reduce the manner of feeding the hospital patient to a restaurant or hotel standard.

4. The Cost of Food for Personnel, *by G. P. Bugbee**

THE problem of the cost of food for personnel seems to me to divide immediately into two aspects: first, raising the whole question of the extent to which the personnel should be given food as maintenance; and, second, the details of the cost of food for those members of the hospital personnel who are to receive maintenance. The question of which groups of employees shall receive maintenance has been discussed many times. In an academic fashion the solution is relatively simple.

I believe we would all be agreed that in spite of past precedence in the hospital field, hospital employees would be freer and happier if they were able to choose their own quarters and eat at the place of their own choice whether it be home, hospital, or elsewhere. "Institutional life" has come to have very definite connotations in the vocabulary of hospital personnel. This is by no means the result of poor accommodations alone but is rather a reasonable reaction to this limitation of freedom. The majority of the people in this country find some of the most enjoyable experiences of life in the choice of a home and the satisfaction of living in a world far different than that in which they earn their living.

Hospital personnel has felt that maintenance as part of compensation was a necessary evil and the issue has been met. However, as a practical matter, in most cases the reasons which originally required the close proximity at all times of each member of the hospital staff no longer obtain. This, of course, is the result of advances in rapid transportation and methods of communication. Unfortunately for most of our institutions, practical considerations very effectively prevent any change in this well-established tradition.

There is little question in my mind but that the cost to the hospital for board and room for an employee is substantially less than the value to the employee of the compensation received as maintenance. In other words, the money now spent by the average hospital for food and maintenance of quarters would not, if distributed to employees receiving such maintenance, purchase for each employee food and quarters of equal grade outside the hospital grounds. Therefore the change from maintenance to cash payment is for most in-

* Adapted from *Hospitals* 10:43-45, Dec. 1936.

stitutions impossible. Funds are not available for such an increase in expense. Many hospitals have large capital investments in homes, which preclude the consideration of any change in policy on this question. Most important of all, the continually increasing demands for additional care for patients have left no funds available with which to finance the expense involved in changing the established method of payment for the services of hospital personnel.

My opinion is, therefore, that though personnel might legitimately request that full compensation be received in cash, the financial conditions of hospitals is such as to prevent changing the present situation except over a very long period of time. It is possible that the total outlay for salary and maintenance if distributed to employees as cash might in the long run be more satisfactory, even though it required an adjustment by both the employees and the hospital. It rests with institutions such as the University Clinics of the University of Chicago to prove whether a policy of cash payment may not in the long run be more satisfactory. Certainly if in fairness we accept the fact that personnel may have reasonable arguments for wishing a change from the present system and if hospital finances prevent this, then we must remember that in the consideration of the cost of maintenance, particularly with reference to food, the employee is entitled to as good service as our abilities and pocketbooks will permit.

With this preface we may well consider certain aspects of those factors which influence the cost of food for personnel. Rather than generalizing on the subject, I should prefer to be more specific and recount for what it may be worth the practice at the University Hospital of the University of Michigan, giving some cost figures of interest which have been developed by a rather complete system for food cost accounting.

For the past ten years it has been the practice at the University Hospital to give full maintenance to most of the professional employees, including resident staff, nurses, both graduate and student, dietitians, and anesthetists. All non-professional workers, porters, maids, ward helpers, and other groups of hospital employees, such as clerical workers, maintenance workers and technicians, are given no maintenance except laundering of uniforms. These employees are free to live and eat outside the hospital, although a pay cafeteria is provided at which many employees purchase at a cost rate at least one meal per day. Average costs in the pay cafeteria last year for raw food were 12.5 cents while direct labor averaged 6.4 cents. The total per meal cost for direct expense was 19.9 cents. The average sale was 22.5 cents or a total cost, to the employee eating three meals, of 67.5 per day. This revenue covers only direct expenses and does not cover any large portion of overhead expense. This group receiving no maintenance comprises 60 per cent of the total number of hospital employees.

Forty per cent of the hospital personnel receive full maintenance including food. Of this group, the major number, or approximately 70 per cent of those receiving maintenance, eat in the nurses' cafeteria. In this cafeteria food is served in the usual cafeteria fashion. Trays are collected from the tables by waiters. The other 30 per cent of employees receiving full maintenance, including the resident staff and persons who comprise the per-

manent supervisory group, are given table service. Neither of these groups has a selective menu, nor is there any limitation placed on the quantity of food per person. Those employees having table service may have second helpings. In the nurses' cafeteria, however, in an effort to reduce waste, certain definitions of the quantity of food per person have been made. The nurses are requested to take only one portion of each item on the menu for the first serving and they may return for as many helpings as they may wish. This rule was only initiated after a study of edible waste in the nurses' cafeteria and the pay cafeteria showed a much greater waste in the nurses' cafeteria. This rule has prevented some waste, particularly among the student nurses, who during the early months of training seem prone to overestimate appetites, which even on exact measurement are fairly substantial. It is of interest to note that even with this limitation, edible waste continues to be 25 per cent greater in the cafeteria where meals are given employees than in the pay cafeteria where each unit of food has a financial measure which is considered by the employee. This difference warrants thought in relationship to the long-range efficiency of maintenance rather than cash payment.

I believe that I am justified in saying that employees receiving food as part of maintenance make no complaint about the grade of food. This does not mean that there is not periodically a request which indicates a desire to receive a cash salary in place of maintenance. In our institution the objections are primarily aimed at the limitation of freedom, particularly where husbands, sisters, or other relatives are living in town, rather than centering as a criticism of food. This I believe is a tribute to the efficiency of our dietary department in menu planning and food preparation, supported by an administrative policy which approves of the best quality of food for personnel.

Prices have within recent years changed so rapidly that any per meal costs which I might quote would be of little value. In addition, the isolation of food costs for personnel and for patients is a difficult problem within our institution due to physical arrangement.

Food for employee dining rooms and for the hospital wards is prepared in the same kitchen. Expenses for food and labor cannot therefore be separated up to the time the cooked food leaves the main kitchen in food trucks.

Menus for the staff and interns' dining rooms, the nurses' cafeteria, and the in-patient wards are somewhat different, in keeping with the demands of each group. Raw food costs would show a slightly decreased expense per meal for each of the three units, somewhat in the order named. However, the difference is very small. Actual food costs per meal for these groups is secured by dividing total expenses of the main kitchen by the total meals served. Food was prepared during the last year in the main kitchen at a raw food cost of 10.5 cents per meal; salary costs were 2.2 cents per meal. These costs are unit costs for food delivered to the serving units in the food trucks. These figures, as well as others quoted in this paper, are for the fiscal year 1935-36 ending June 30.

In our institution expenses in each serving kitchen are accumulated separately. It is, therefore, of interest to study the difference in expenses for labor in the service kitchens, for dining rooms, the nurses' cafeteria, and the ward units. These salary expenses are 4.4

cents, 3.8 cents, and 4.8 cents, respectively. These figures cover the unit cost for serving and dishwashing. However, since patient trays are carried to the patient and returned to the serving kitchen by nursing department employees, the figure for ward units does not include all expenses which might reasonably be charged against this service.

Thus we see that while the labor cost for serving employees is greater for table service than for cafeteria service, ward service has a greater cost for labor service than either of the employee dining rooms. Total cost per meal for all employees was 20.2 cents for last year, as against a cost of 20.8 cents per meal served patients.

In conclusion may I say that in my opinion personnel should, where possible, be given cash in lieu of maintenance as salary. When this is not possible the hospital has a definite obligation to make a sincere effort to give satisfactory meals to those employees who are required to eat three meals per day of hospital food. The cost of table service is greater than cafeteria service for employees. However, the labor cost for either type of service is below the labor cost of service to bed patients. Through an efficient dietary department, employees may be served meals which will avoid classification as institutional food at a total cost per meal below the cost of meals served patients.

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CHAPTER XXIV. HOUSEKEEPING

I. Saving Money in the Housekeeping Department, by *Joseph C. Doane, M.D.**

THE housekeeping department of the hospital is not one that is in any measure spectacular in its organization or functioning. A clean, orderly, and well-kept hospital is a condition that is taken for granted by the public generally. Yet when such qualities are not found, their absence often rightfully arouses criticism. In fact, the quiet, efficient housekeeper and her staff rarely receive the amount of credit or acclaim due them. Yet it may be said with utmost truthfulness that there is no other department in the hospital that is more of a basic necessity than a well-organized, smoothly conducted housekeeping department of this type.

This department concerns itself with the manifestation of the homely virtue of cleanliness in which dusting, scrubbing, and wall and window washing are tiresome, trying, yet most essential activities. The importance, therefore, of good housekeeping in relation to the care of the sick cannot be overemphasized. It is manifestly impossible to produce the best results from the medical and nursing services if the patient is not surrounded by a clean, sanitary, and pleasant environment. The responsibility for providing such surroundings falls in a large measure upon the housekeeping department.

But the success of the endeavors of the personnel of the housekeeping department is closely linked with the activities of the maintenance department which concerns itself with repairs and replacements of hospital property. The incentive for maintaining a high degree of efficiency on the part of such of the hospital personnel as answer to the housekeeper is frequently lacking when an institution is not in a more-than-average state of repair. Window sills, walls, door jambs, and floors that are innocent of paint do not stimulate the same energetic effort on the part of a cleaner as do those that present an immaculately white appearance. When plaster is hanging in shreds from walls, it is neither possible nor probable that the porters and wall washers will put forth their best efforts to clean them.

On the other hand, institutions are frequently observed that are old and in but a passable state of repair. But they are immaculately clean. In such hospitals, the housekeeper deserves much more credit than does one who is employed in an institution that is new and in good repair. There must be established a close relationship between these two important institutional departments if the hospital is to represent at all times a sanitary and hygienic place for the treatment of disease.

The ease and success with which the housekeeping department performs its work will depend on many factors besides the size of the staff and the amount of compensation its members receive. A new institution can be much more cheaply maintained from a housekeeping standpoint than an old one. A unit plant has its advantages over one that consists

* Adapted from *Mod. Hosp.* 34:95-99, Apr. 1930.

of detached buildings. The hospital in which provisions for proper housekeeping have been installed at the time of construction is, of course, easier to maintain than one in which many of these important details were neglected when it was planned.

In making plans for a new hospital many relatively inexpensive details may be included which, if inserted later, will prove expensive. These details will decrease the expense and increase the efficiency of the work of the housekeeper. Round corners are necessary and cove bases are advisable in the construction of wards and rooms. It is but a matter of primary consideration to insert the proper waterproofing in pipe sleeves and to be certain that all floors upon which water will be used as a cleaning medium are of the type that will not be harmed by it. Terrazzo, good linoleum, or some of the efficient composition floorings on the market are types of construction materials that are not harmed by the use of water in cleaning.

All informed hospital administrators and architects provide for the future washing of walls. Certain types of hard cement covered with enamel paint are commonly employed for this purpose. The absence of right angles at wall and ceiling junctures favors ease in cleaning. Too frequently when a new hospital is ready for occupancy it is discovered, much to the consternation of the administrator, that it is impossible to wash windows without removing insect screens. Such a procedure is difficult in multi-storied buildings and usually results in windows remaining unclean for long periods of time unless a contract is let outside the hospital for this work. Certain types of screens hinged at the top have been found efficient, and in some instances hospital superintendents have felt that windows that are especially built to swing at right angles to the sash favor window cleaning. More often than not, there are discovered radiators with sections placed so near together that hardly the width of the hand separates them. The so-called hospital radiator, while requiring slightly more room than others, is much more easily cleaned than the type usually installed.

Some mistakes that would appear ludicrous were they not so serious have been made in hospital planning. In a new institution costing several million dollars, a large skylight was placed over the pathologic museum. After the acceptance of the plant, it was discovered that there was no way by which a porter could reach the upper surface of this skylight in order to clean it. An expensive rearrangement of runs and doors was the only solution.

In operating rooms, supposed to be modern, too frequently radiators are enclosed in metal and glass. These partitions, reaching to the ceiling, leave insufficient space for the proper cleaning of this area. Indeed, in some instances it has been observed that there was provided no possible way by which this portion of the operating room could be cleaned. The objectionable features of such a situation with its attendant infective possibilities need no elaboration. Such a fault bespeaks a too casual acquaintance with hospital necessities, or else an inexcusable carelessness in the original planning.

It is hard to understand why, in the construction of new hospitals and in the renovation of old ones, there is such a disinclination to provide sufficient janitorial closets for the temporary storage of mops, brooms, the coats and hats of orderlies, attendants, and porters, and cleaning material and buckets. Too frequently one observes porters and orderlies

hanging their hats and coats in conspicuous places about ward units. When criticized they easily justify their acts by stating that no place has been provided for them. Utility and toilet space is often malodorous with the aroma of stale mops and soiled dust cloths. Why more institutions do not provide proper space in which mops may be aired and sunned is difficult to understand. Frequently the walls of the smoke chambers of fire escapes may be used for this purpose. Sometimes specially planned balconies leading from utility rooms furnish the necessary facilities for the proper airing, sunning, and drying of mops.

Inspection of long runs of corridors, outdoor sun porches, and roof gardens often fails to discover the presence of water taps so useful in cleaning. Basements are notoriously difficult to clean. Elevator pits frequently have no means of access for the porter who should remove from them waste paper and other collections of dirt. Moreover, there is nothing more offensive to the eye than to observe dumb-waiter, passenger, and service elevator shafts that are unsightly with dirt because those whose duty it is to correct and prevent such conditions have been negligent. There is usually no more uncleanly site in the hospital than linen chutes. In modern hospitals, a flushing device is frequently found, but too often there are observed chutes lined with galvanized iron with no provision for their proper cleansing. In hospitals with incinerators, the chutes leading to them are frequently insanitary because of the soiling with garbage and other material placed in them for burning. It is impossible economically to maintain a hospital in a sanitary state in which the common necessities have not been placed at the time of construction.

In most institutions of size the housekeeping department exists as a separate division in the hospital organization. This service as a rule is headed by a woman of experience who possesses a strong aversion to uncleanness and disorder. She is usually answerable to the superintendent of the hospital. In some instances her lines of authority proceed to the administrator through the chief nurse. The housekeeper should have complete control over all the personnel in her department. She should engage and discharge at her discretion. In other institutions, the superintendent, particularly if this officer is a woman, makes herself directly responsible for the housekeeping and issues orders directly to those concerned with it.

In many of the best conducted institutions in the field, the superintendent of nurses is responsible for the cleaning of the hospital. This arrangement probably represents a relic of the days when nurses were not only expected to care for the patients but were also expected to perform many of the duties of the housekeeper. This requirement is one of the rocks upon which those of the old school have split with those of the newer practices in nursing. Although there is merit in this plan, the supervision of janitorial help should not be allowed to detract from the contribution rightfully expected from the head of the nursing department.

It is regrettable that too frequently friction exists between the chief nurse and the housekeeper. But there are some practical aspects to this relationship that deserve consideration. If porters and maids do not clean properly, ward supervisors should be empowered to give

them orders directly without complicating the situation by requiring that these reports be made through the chief nurse to the superintendent and in turn to the housekeeper.

A set-up to be condemned is that in which a house committee of the board of trustees is responsible for the cleanliness of the institution. In too many instances, such a committee, or its chairman, issues orders directly to the housekeeper without the knowledge or approval of the superintendent. The scope of the duties that are usually assigned to the housekeeper and her staff varies with the institution. In some cases, responsibility for the cleanliness of the whole hospital plant, including operating rooms, utility rooms, basements, halls, wards, nurses' homes, and even the grounds of the institution is assigned to the housekeeper. In others, she is not held responsible for the condition of operating rooms, dining rooms, basements, grounds, nurses' homes, or superintendents' and physicians' living quarters.

The cleaning of areaways, the washing of windows, and the maintenance of grounds in a sanitary condition represent some of the types of duties that are frequently assigned to a foreman of cleaners who is not answerable to the housekeeper. No institution can present an orderly and sanitary appearance if its front and back yards are littered with refuse. An annual official disposal should be made of such discarded material and equipment as broken wheel chairs and other surgical equipment, artificial limbs that have been donated but are useless, crutches, canes, and the hundred and one useless and space-consuming articles too frequently found in the hospital's back yard.

A definite assignment should be made to cover in detail the cleaning of every stairway, areaway, ward, room, corridor, basement, and window in the hospital. In the institution that is being most economically maintained in a sanitary fashion, a strong administrative head upon whom the responsibility for the work has been definitely placed is sure to be found.

Some hospitals believe that it is more economical to contract on an annual basis for window cleaning than to perform this work by the aid of the institution's own personnel. Much depends, of course, on the size of the institution and upon the financial attractiveness of the contract secured as to which of these plans is most efficient.

Something has been said concerning the relationship the housekeeping department must bear to the department of maintenance and repairs. The activities of the former department have an equally important relation to the actual nursing of patients. The day is fast disappearing when pupil nurses are expected to perform the major portion of the housekeeping of the departments to which they have been assigned. Yet it is discouraging to note that in some instances pupil nurses are still required to scrub, sweep, and dust to their educational disadvantage as well as, it may be remarked, to the detriment of the morale of the school and of the reputation of the hospital.

An endeavor has been made to learn the proper ratio between the number of pupil nurses and all such subsidiary help as attendants, porters, and others concerned in the conduct of ward units. This ratio varies considerably and ranges in a descending scale from

one pupil nurse to seven other employees to one pupil nurse to one other employee. In an institution, for example, in which a ratio of one attendant or porter to each pupil nurse is found, it may be concluded the pupil nurse is more likely to be found performing janitorial duties to the detriment of the patient than in instances in which there is an average of four such employees to each pupil nurse. In a group of fifteen eastern hospitals, it was found that for every pupil nurse there were three and three-tenths persons employed. These included maids, orderlies, and attendants who were responsible for assisting the nurse in her ward work.

In considering the efficiency and economy of the conduct of the housekeeping department, one must view not only the methods employed in cleaning but also the type of personnel engaged, the amount of salary they receive, the number of hours they are employed during the day, and the amount of sick leave and vacation time they are granted.

The duties of the housekeeper are often of a more comprehensive nature than those that comprise the mere supervision of janitorial work. To her are frequently assigned many types of persons. She has one or more assistants. Frequently the house mother or matron of the nurses' home or of other personnel buildings answers to her. Sometimes hospital seamstresses are also included in her department. In small institutions the supervision of the dietetic work of the hospital is frequently required of the housekeeper. The nomenclature applied to the personnel of the housekeeping department, therefore, varies with the organization and type of the hospital. Porters, maids, yardmen, scrubwomen, head janitors, and in some instances even chauffeurs and mechanical help, such as painters, plumbers, and handy men are assigned to her. In smaller institutions, the supervision of the laundry is often required of the housekeeper, and all laundry employees appear on her lists. This is found to be the case in a hospital in a southern city. It may be remarked incidentally that this particular hospital is not distinguished for cleanliness and that the housekeeper there is expected to do more than is humanly possible for one woman to do efficiently.

In summarizing this description of the varied arrangements observed in so far as the housekeeper is concerned, it may be said that a centralization of authority seems advisable with regard to the cleaning of not only the hospital but also the nurses' home and other personnel buildings. It may appear more efficient for the dietitian to be responsible for the cleaning of the workrooms and kitchens under her supervision. It probably is wise for the department of maintenance to supervise the cleaning of yards and areaways. Too many duties should not be given the housekeeper because of the likelihood of her then not being able to do any duty thoroughly.

How much should be paid to the housekeeper and the members of her group? The accompanying table sets forth in a complete way the practice in a group of twelve institutions. This takes into consideration the housing, the number of employees, uniforms, hours on duty, vacation time, and wages of porters and maids. It will be noted from this table that 48 of 250 or about 20 per cent of these employees live in the hospital. Five of these institutions furnish all uniforms and seven do not. The average wage for porters is

TABLE SHOWING PERSONNEL MANAGEMENT IN TWELVE HOSPITALS

	A	B	C	D	E	F	G	H	I	J	K	L
Employees live in	4	6	0	0	7	18	3	6	1	3	1	2
Employees live out	19	55	22	20	15	12	4	22	5	14	6	8
Total number of employees ...	123	61	27	118	22	30	7	28	6	17	7	10
Uniforms furnished	No	Yes	No	No	Yes*	Yes	Yes	Yes†	Yes	Yes*	No	No
Uniforms laundered	Yes	Yes	Yes	Yes	Yes*	Yes	Yes	Yes†	Yes	Yes	No	No
Hours of work:												
Maids	8½	8	8	8	8	8	8-9	10	8	9	7½	8
Porters	9									8		
Days off a month	3	4	4	2	3	3½	4	M-3 P-2	3	4	3	4
Vacation	1-2 wks.	1-2 wks.	2 wks.	Not given	1-2 wks.	1-2 wks.	2 wks.	None	1 wk.	1-2 wks.	1-2 wks.	1 wk.
Wages: porters	\$58	\$70	\$90	\$50	\$45	\$40		\$66.77		\$70		
Wages: maids	\$68	\$60-65	\$60	\$50	\$37	\$40-45	\$45	\$50	\$65	\$70-80	\$52	\$50

• Porters only.

† Head porter only.

\$61, and for maids, \$55. When it comes to the question of the salary usually paid for housekeepers, in six of these institutions it was found that an average of \$118 a month with maintenance was paid. In two the housekeepers' salaries, without room but including board and laundry, were \$125 and \$150 a month. These are larger hospitals, averaging 250 and 400 beds respectively. In one institution—a large city hospital—a salary of \$165 a month with maintenance is paid to the housekeeper. The average assistant housekeeper's salary in this study, with complete maintenance in three instances, was \$68 a month and in two others it was \$100 a month without room but with board and laundry. The average salary for maids in eleven hospitals was \$60 with three meals and the laundering of their uniforms. The average salary for porters in eight instances was \$60 a month with three meals and the laundering of their uniforms. The largest number of these persons do not reside in the institution.

Great variance will be noted in the number of hours off duty, days off, and length of vacations allowed the various employees of the housekeeping department. In some instances, maids and porters worked as long as ten hours a day. In others, due to unexplainable reasons, maids were required to work one hour longer than porters. The average for this group was eight hours a day.

In most institutions it is impossible to perform much cleaning at night. Unlike office buildings, in which all rooms are vacated at nightfall and which lend themselves well to night cleaning, the hospital cannot be disturbed by men and women at work during these hours. It would seem a matter of worthy consideration if corridors and lobbies of administration buildings could be cleaned at night rather than to risk the possibility of visitors and others falling on wet floors.

Nothing has been said in regard to the advisability of departing from antiquated practices in performing the work of the housekeeping department. The engaging of a man at even such a meager salary as \$35 a month to polish floors with an old-fashioned iron is an extravagance. The scrubbing of corridors, dining rooms, and other areas of considerable space with mops and hand brushes is not only inefficient but it is also costly. Excellent mechanical scrubbing and mopping machines are on the market and the polishing of waxed wood and linoleum floors is made much more efficient, inexpensive, and easy by the use of an electrically driven machine. Little experience with such apparatus is required to perform this work properly and the hospital profits not only in efficiency but in dollars and cents. It is a difficult thing to convince many boards of trustees that several hundred dollars spent in this way represents an excellent investment from a purely business standpoint. Thinking lay people are not slow to see that hospitals cling not only to antiquated business methods but that they are also backward about adopting labor-saving devices which have been found so efficient and worth while by industry everywhere.

To conclude, therefore, it seems that it is wise to house only the minimum number of representatives of housekeeping departments; that eight hours a day, two weeks' sick time allowance in a year, and two weeks' vacation are the customary daily working, sick leave, and vacation periods; that the housekeeper should rank as a department head; that the

hospital for the sake of uniformity should furnish and launder uniforms, and that mechanical aids to cleaning are efficient and economical.

2. How the Hospital's Housekeeping Department Should Function, *by Edgar C. Hayhow**

THE history of the development of institutional housekeeping would be an interesting study for the hospital administrator. It has no doubt evolved from the routine of simple household management, and, following the nineteenth century era of development of the sciences and of the evolution of machines, it has become recognized as a definite and specialized job.

The necessity for trained supervision has been realized. At the present time many colleges offer courses in household economy, domestic science, and institutional household management for training women in the practical as well as the theoretical side of household administration. The value of these courses is indisputable, but even more important are a thorough groundwork in practical problems, practical experience, and a personality that cannot only meet the various outside and departmental relationships but can successfully cope with the psychological problems presented by the housekeeping employees. The average mentality among persons obtainable for the menial work of the department is probably lower than in any other hospital division. This fact becomes doubly evident in times of prosperity, with the resultant labor shortage.

If it were possible to set up a skeleton organization or outline a standard of academic training for household duties that would be applicable to every type of institution, the task of housekeeping would, no doubt, prove more simple. But experience shows each job to be unique, at least in certain particulars. A set of standards for the housekeeping department must, therefore, avoid details if it is to be universally applicable. The large hospital, the small one, the municipal plant, the private sanatorium, the urban, the suburban, the rural, the antiquated, and the modern hospital all offer distinct problems. In the preparation of this article, about a dozen institutions were studied. Conditions failed to coincide in any two of them. The following list of functions was frequently found, however, attached to the housekeeping department:

- Supervision of general household cleaning throughout the entire physical plant, including the wards, the private rooms, the halls, lobbies, offices, the quarters of administration, staff, and personnel

- General supervision of the laundries and linen rooms

- Transportation of soiled and clean linen throughout the institution

- Requisitioning and distribution of the necessary household cleaning supplies

- Cleaning of porches, sidewalks, and entries

- Care of furniture and requisitioning of furniture repairs

- Requisitioning of linen and supervision of sewing and mending

- Distribution of ice and removal of institutional refuse

* Adapted from *Mod. Hosp.* 30:103-108, Mar. 1928.

- Maintenance of various inventories of supplies, and preparation of reports of performance
- Employment of the personnel and the proper allocation of routine duties to carry on the necessary work
- Periodic reports to the superintendent covering the work of the department

In all the institutions studied, the housekeeper was responsible for the physical cleanliness of the institution and for the supervision of maids, porters, and cleaners. In many cases her duties included the supervision of the laundry and general linen rooms and the distribution of soiled and clean linen. The larger hospitals separated the cleaning of the nurses' home from the main institution, the housekeeper of the nurses' home coming under the control of the directress of nurses. An efficient scheme for a large organization provided a housekeeper with three assistants—one general assistant, an assistant in charge of the laundry, and one in charge of linen collection, distribution, and repair. Most large institutions provided a foreman in charge of the porters and a foreman in charge of laundry. Small hospitals provided one housekeeper in full charge of cleanliness, laundry, and linen.

In order to establish a standard method of performance, special attention is drawn to the need of developing careful working schedules and job analyses, and to the importance of hourly and daily supervision. If possible, a detailed housekeeping service manual should be compiled; otherwise typewritten directions will serve this purpose. The following is part of a working schedule for the plant of a 150-bed institution. The department is supervised by a head housekeeper. Two assistant housekeepers are employed, one in charge of chambermaids, porters, floor polishers, window cleaners, and housemaids, and the other as matron in charge of linen storage and distribution, sorters, and seamstresses. (The laundry is supervised through a laundry foreman.)

The assistant housekeepers report employees' time to the housekeeper each morning for the day previous, checking the time book accordingly. The housekeeper plans the day's routine; if short of help, she arranges the schedule for work that is absolutely essential, such as linen and ice distribution, garbage collection and office and reception room care. This necessitates overlapping of duties and combination of efforts. This must be done with care so as to operate the department without any evidence of lack of service or general inefficiency. The housekeeper arranges for the filling of vacant jobs. This is usually done through employment agencies, newspapers, or applications on file. References must be looked up in each instance.

A thorough inspection of the entire institution is made at 7, 9, and 11 A.M., also at 1 and 4 P.M. The first round is made by the assistant housekeepers. A careful notation is made of general cleanliness, need for repairs, and efficiency of employees on the various stations. Daily linen requisitions are inspected and, if necessary, altered. Altering of requisitions from units not a part of the housekeeping department is discussed with appropriate department heads. In hospitals using an "exchange system" this is not necessary.

Stated hours are planned for distribution of soap, soap powder, and other departmental

supplies, and these processes are arranged so that all errands can be accomplished with as little waste of time and steps as possible.

Maids are responsible for the proper cleaning and care of personnel quarters, lavatories, private rooms, and wards, as assigned. Porters care for certain "stations" or portions of building, as assigned. Each job should be numbered and a job analysis prepared for it. Porters' duties usually include general cleanliness of walls, floors, furniture, and in some hospitals of windows; also, assistance with all work requiring heavy lifting or rearrangement of beds, furniture, and equipment. The duties of garbage men, ice men, and soiled-linen porters are self-explanatory. Schedules should be prepared for collection and distribution.

Three methods of window cleaning are practiced: (1) an outside contract provides periodical cleaning of all windows; (2) one or more window cleaners are employed by the institution and rotate under direction of the housekeeper; (3) the cleaning of windows is part of the duty of the porter assigned to that section. If the hospital staff cleans windows, thought must be given to proper belts and straps for employees' protection.

The question often arises as to the advisability of maintaining a separate housekeeper under the nursing department. The practice in the majority of small and medium-sized institutions is to have complete housekeeping supervision under one person. Ordinarily, for them, dual housekeeping control is not desirable. The housekeeper of the nurses' home in large institutions can readily be, and usually is, under the directress of nurses.

Requisitions for supplies are made out by the housekeeper or her assistant, in accordance with current needs. These are signed by the housekeeper and sent to the administrative office for approval. In a similar manner, requisitions are originated for needed repairs or alterations. Some hospitals use a "Patient's Discharge Slip," notifying the housekeeper of the discharge of patients and the necessity of cleaning the room and washing the walls. Since hospital rooms are generally in demand, this work must be done as quickly as possible.

Mechanical household devices are finding more and more use in hospitals. Vacuum cleaners, floor polishers and cleaners, electric sewing machines save labor and expense and usually give efficient results. A definite training is necessary for the handling of certain mechanical appliances, and in such a case it is best to assign the machine to one person, train the person and arrange a schedule throughout the institution. This is especially true of floor machines, where experience in handling brings better results.

It is important that carefully worked-out cleaning formulas and cleaning methods be established. The mere combination of soap and water may give a white surface—so white that not a sign of the original paint may be left. It should not be expected that every porter and maid is trained in the art of cleaning. Close supervision and instruction in the methods of cleaning and the proportions of materials used must be given.

Equally important is the equipment used. Floor polishers, vacuum cleaners, mops, brushes, pails, brooms, wringers, sponges, and rags are manufactured in numerous types,

sizes, and qualities, and the housekeeper should be trained in their selection and application. The care of this equipment also needs more than average attention. The reader is here referred to excellent volumes and monographs on hospital cleaning.

Three major functions are carried on in the hospital linen room: the acquisition and issuance of new linen; the daily exchange of clean linen for soiled linen; the proper marking of new linen, general routine mending, and plain sewing.

The methods for acquisition and distribution of linen depend to a great extent upon the nature and size of the institution. Buying should be by specification. The standard sizes outlined by the U. S. Department of Commerce and the American Hospital Association are recommended. In marking linen it is wise to date all pieces so as to check the life of the goods. It seems to be the general practice to have distinctive marks for the linens, as follows: ward, private, staff, and service. Marking for each floor or each ward is too specialized. Staff, patient, and servant linens can be differentiated by a distinct border design, to aid in sorting.

Seamstresses are usually employed to make children's and infants' garments and various medical and surgical pads, binders, and covers, and this practice effects a marked saving.

A hospital blessed with a sufficient linen supply to meet emergencies is fortunate. Ideally, there should be enough linen in circulation for division into four equal parts, as follows: in actual use; in reserve in linen cupboards; in linen room; in process of washing. This provides for emergencies and laundry breakdowns and guarantees a sufficient supply throughout the institution. Without such a system the practices of borrowing or hoarding arise and always lead to trouble and confusion. Some hospitals issue linen on an exchange system; a linen truck makes the rounds and exchanges clean for soiled pieces by actual count.

A complete inventory should be kept of linen and linen supplies, both in central linen departments and in individual units. Test checks of various sections should be made from time to time. Shelves should be labeled, goods stored and packed according to unit-sized packages, and arranged in some definite order or system. Reference schedules should be supplied.

There seem to be two definite schemes of laundry management in institutions, one recommending a separate department and the other having the laundry under the control of the housekeeper. Arguments for and against can be stated. The decision depends upon local conditions in each hospital, including the training and experience of both the foreman of the laundry and the supervising housekeeper. The size of the institution also influences the type of organization; in the larger ones the laundry is often a separate department.

Certain basic equipment is found in every modern laundry, the number of machines increasing with the volume of work handled. For a certain hospital of 112 beds the installation is:

One 42-by-54-inch washer
One 28-by-23-inch solid head washer
One 30-inch extractor
One 3-compartment stationary tub

One 30-by-42-inch drying tumbler
One 4-roll, 100-inch ironer
Two presses
Three ironing boards

Rules for operating machines and preventing accidents should be posted in the laundry. Schedules of machine care should be established and instruction offered to the complete staff.

The importance of an efficient foreman in the laundry cannot be overemphasized. Poor results due to lack of technical skill in the foreman or to constant changing of laundry help cost exorbitantly. It is well for the laundry foreman, under the direction of the superintendent, to call in experts periodically for washing consultation. Proper washing formulae must be worked out to fit the conditions encountered.

Infected linen and gauze are among the hospital's laundering problems. Some institutions sterilize all such articles before putting them through the usual washing processes; others consider the usual wash-wheel process sufficient and have evidently proved their point bacteriologically. Usually, badly soiled linen should be soaked, off the ward, before being sent to the laundry.

Every hospital superintendent hears numerous complaints concerning the laundry department because of torn linen, poor laundering, and lost personal linen. Errors are apt to occur on both sides, and complaints should be carefully studied so as to prevent future trouble.

No other class of linen is exposed to staining as is hospital linen. Directions should be typewritten and posted in a conspicuous place near the washing department. Formulas for washing, scouring, bluing, and starching also should be prepared.

It is the established custom for hospitals to do a certain amount of personal laundry for employees. This should include only linen and cotton articles, and the privilege should be limited, according to departments. If silk or woolen materials are accepted by the laundry, the hospital should take no responsibility as to the outcome of the washing. While care should be maintained in the proper marking of all personal clothes and in proper delivery, it is not customary for the hospital to reimburse employees for clothes lost in the process of washing, unless losses are extensive and frequent.

Records should be maintained of the date, quantity, and quality of each new linen issue, and when old linen is discarded the life of the goods should be ascertained. A report should be made periodically to the superintendent. Inventories of all materials should be kept in active files. A monthly report of the volume of work handled and the cost of maintenance should be established. The laundry is one department that can show a definite unit cost of maintenance, and the efficiency of the department can be measured by dollars as well as service.

There are two phases of housekeeping and laundry management that give the hospital in general and the department head in particular no little concern, namely, the high rate of labor turnover and the difficulty of supervision, particularly in housekeeping, where the employees perforce cannot be closely supervised for more than a fraction of their working day. The housekeeping department is required to man itself with an undependable and shifting type of employee. Successful housekeeping administration depends much upon the head's ability to "get along" with a great variety of personalities, mostly coupled to subnormal mentalities. No person, however intelligent, is satisfied with too many

"bosses" and with ill-defined responsibilities. Much money, time, and energy could be saved through a complete analysis of workers' jobs, so that all might understand their specific duties, and so that workers might not be called here, there, and everywhere to do any job. Orders should come only from the department head or the designated lieutenants, and if odd jobs are to be required the employee should know it at the start.

What else can be done to eliminate this high turnover? Various methods are suggested—training new personnel, proper housing, recreational facilities, wage-increase incentives, promotions when deserved, good food, and systematic performance. The training of hospital employees promotes permanency and lowers expense. New help is expensive, both in time and in supplies, and systematic lectures on building and equipment maintenance, paint and painting, floor polishing, and purchase and handling of supplies inspire employees to improve their work and should reduce cost.

The success of an institution is judged not alone by the type of professional service rendered by the doctors and nurses, but equally by the kind of food served and by the general state of cleanliness and upkeep. The public pays little attention to administrative policies or programs. A clean house signifies good management; a dirty house, bad management. Good housekeeping and good laundering are major problems and must be as carefully checked as the efficiency of the medical service or the quality of the food.

3. A Housekeeper's View of Asepsis, *by Mary W. Northrop**

THE problems of the housekeeping department in regard to the maintenance of asepsis in the hospital consist in establishing a superior standard of cleanliness and in avoiding the spread of contamination. The first important factor is to have a building that can be kept clean. When a new building is projected, the housekeeper should check its plans and specifications with the cleaning problem in mind. Some of the points she will consider are:

1. All surfaces must be smooth and washable.
2. Corners must be rounded.
3. There must be no cracks. The more nearly the inside of a hospital resembles a china bowl, the easier it is to keep clean.
4. All fixed equipment must be either built into the wall or set far enough from it for ease of cleaning. The distance required depends upon the length of the equipment. A small sterilizer, for example, must be far enough from the wall and from other equipment to admit a man's arm readily; say 6 inches. A mattress sterilizer, which is 8 feet long, must be far enough from the wall to admit the man. If the area to be cleaned is hot (as where there are uncovered steam or hot water pipes) a greater distance must be allowed.
5. All fixed equipment that is not built into the floor and all other equipment that is too heavy to be readily moved should be set on legs so that the lowest shelf or rung clears the floor by at least 8 inches. If the legs are hollow, the ends should be sealed.
6. There should be no junk-collecting areas, such as closets without a designated purpose.

* Adapted from *Mod. Hosp.* 52:84-88, Jan. 1939.

7. Construction should be such as to minimize the runways for mice and vermin and to exclude rats.

8. All areas that are not sealed should be readily accessible.

9. Either a refrigerator or a room especially built for the purpose is needed for garbage storage. This room should be built in such a way that it can be washed with a hot water hose. Water connections, drains, and waterproof electric fixtures and switches should be provided for it. It must be ratproof and verminproof. If the room is not refrigerated, it should be in as cool a location as is possible and have adequate cross-ventilation and screening from flies.

10. A well-constructed incinerator is essential. The space surrounding this incinerator should be constructed like the garbage room, washable and protected from flies. Provision should be made for cleaning garbage cans. Washing with a hose or a spray is not sufficient; there should be facilities for thoroughly scrubbing the cans. A short length of steam hose will be found valuable in finishing the cleaning.

11. Laundry chutes must be washable and a water connection must be provided at the top and a drain at the bottom.

12. Assurance must be given that an ample supply of water at 180° F. will be available in the laundry at all times and that steam pressure will be sufficient to raise the water in the washing machines to 212° F. for boiling contaminated linen.

The housekeeper in an old hospital may find these specifications discouraging but if she will ask the engineer to make the rounds with her, together they may find that many improvements can be made in an old building. The "calling-card test" should be applied to cracks, as any crack large enough to admit the edge of a calling card is too large for a hospital. Many cracks, such as those around door frames, can be filled by the maintenance man. Rough surfaces can often be made smooth and corners can sometimes be rounded. Perhaps pieces of equipment that are difficult to clean behind can be moved. Some inaccessible areas, such as the space under built-in cupboards, can be opened up by making a panel movable or by cutting a door. Given a back yard, proper provision for garbage storage and removal can be made at little cost in institutions that seem too crowded to give proper space to garbage within the building.

If the facilities of the heating plant are insufficient to supply enough hot water and steam to the laundry, it may be feasible to provide in next year's budget for a boiler to increase the supply, or perhaps it will be helpful to re-schedule the work so that the laundry does not call for steam at the same hours that the boilers carry a heavy load for the kitchen and surgery.

The next problem is the training of personnel. The average hospital worker is afraid of infection without having any understanding of the means by which it can be prevented and so assumes an attitude of bravado to cover that fear. He has no conception of the reasons for the rules that are made relative to the handling of contaminated material, with the result that even if he remembers to follow the letter of the law he often violates its spirit. Told that garbage is contaminated, he will avoid handling it with his hands and will

wear canvas gloves for protection, which he afterward puts in his pocket. Would it be feasible for the hospital bacteriologist or the nursing instructor or the supervisor of the communicable disease unit to give a course of half a dozen lectures and demonstrations to the nonprofessional personnel? The terminology could be simplified so as to be understood easily and members of the class could be asked to repeat the demonstrations. The type of person who is employed as a hospital cleaner learns better by doing than by the lecture method.

It is sometimes helpful to give the employees two or three slogans that are easy to remember. For example: "Nothing belongs on the floor except the feet." The floor is always a contaminated area; articles dropped on the floor should be considered contaminated. "Remember that the germ carriers are the three F's—Food, Fingers and Flies."

It goes without saying that the housekeeper herself must have a knowledge of bacteriology, the principles of hygiene, and the technique used in handling communicable disease. If her background has not given this information, she must take pains to obtain it. If courses in local schools or colleges are available to her, she should enroll by all means. If not, she has access to the public library and usually to a good nursing library as well.

Times have changed in hospital housekeeping and procedures have been improved and simplified with better understanding of the problem. Scrubbing brushes and harsh cleaning methods are not compatible with smooth surfaces. Smooth surfaces give up their soil more readily than coarse or rough surfaces and therefore promote the cause of cleanliness as well as add to the attractiveness of the institution's appearance and reduce its maintenance cost. It is, therefore, a primary responsibility of the housekeeping department to see that these surfaces are not damaged. The housekeeper obviously must be enough of a chemist herself to understand the reactions of cleaning materials.

We no longer believe in magic and, therefore, we do not accept the special claims of manufacturers for their products without critical scrutiny, nor do we load our shelves and confuse our employees with a horde of different cleaning compounds. To have too many preparations in use causes the employee to make mistakes. Besides it is expensive. There are in general three classes of cleaning materials and we need one representative of each class—an alkali, a detergent, and a soap.

The alkalies should be used only under careful supervision, but they are occasionally needed. Of detergents, or scouring powders, there are many on the market. They are usually composed partly of insoluble material and partly of soap. The insoluble material should not be gritty and the soap should not be strongly alkaline, as grit scratches and alkali damages most surfaces. Both of these qualities are easily estimated before purchasing. Rub a bit of the compound between the thumb and forefinger or between two glass laboratory slides. If it feels coarse between the fingers or scratches the slide, it should be rejected for cleaning fine surfaces. Alkalinity can be tested by the laboratory, but the housekeeper also has an ever available indicator of her own that she need not be afraid to use—the tip of her tongue. The soap that is to be used must also stand the tip-of-the-tongue test and the housekeeper can try it for her own use as a hand soap. If it dries the oil from her

hands, it will also attack the oil in paint. With an alkali, a detergent, and a soap, the housekeeper is prepared to keep her hospital clean.

The day of the "hospital smell" is gone because we no longer swish antiseptics and deodorants around to give us a false sense of security. Soap, water, and daylight are the best antiseptics and if the hospital and the patients are kept clean and there is sufficient ventilation deodorants are unnecessary. The use of a deodorant is an acknowledgment of failure. Doctors and nurses use soap and water for cleansing their hands and the basin of formaldehyde has disappeared. Housekeepers use soap and water for cleansing the hospital, without benefit of a few drops of smelly antiseptic in the mop water.

We no longer fumigate hospitals since we have discovered that the fumes of formaldehyde or sulphur inconvenience us far more than they do the bacteria. When a patient recovers from a communicable disease and is discharged from the hospital, everything in the room that may have been contaminated is washed, including at least that portion of the walls immediately surrounding the bed, and the room is exposed to daylight—sunlight if possible—before being used. Again, the use of soap and water and the sun have taken the place of more elaborate methods.

Nurses used to soak contaminated linen in an antiseptic solution before sending it to the laundry. It is no longer considered necessary to have nursing time spent in such work or to have the ward cluttered with tubs of soaking linen. In the King County Hospital System, Seattle, there are two types of bag that fit the hamper frames. One, of white canvas, is used for ordinary soiled linen. The other, of striped ticking, is used for linen to be isolated. When the striped bag is full, it is removed from the frame and closed with a draw string. It stays closed until it reaches the laundry and the wash man is ready to put the linen into the tubs. Then he opens the bag and empties its contents, without handling, into the wash tub. Here the linen is first subjected to a cold rinse to remove organic material, as is all of our other linen. Then hot water is turned on. This washing is continued for ten minutes after the water starts to boil; in other words, contaminated linens are boiled for ten minutes.

The major problem in the laundry, as elsewhere, would seem to be the education of the personnel. Anyone who has ever visited a large laundry remembers the wash man at his row of tubs, filling one with soiled linen and unloading the clean linen from the next. Both he and any other members of the laundry crew who handle soiled linen must learn to avoid the contamination of their clothing and of the laundry floor and equipment, and they must learn to wash their hands and arms thoroughly between the handling of soiled linen and the handling of clean so as to protect the clean linens from contamination. If they are to wash their hands frequently, the same kind of equipment for that purpose should be provided for them as for other hospital workers. They cannot leave their work to walk the length of the laundry to a wash basin. They should not use the type of faucet that is turned on by hand and thus contaminate the faucet. A sink with knee-controlled faucets and running warm water should be provided in the laundry washroom. Often in hospital laundries the only water available is that piped into the wash wheels.

No problem of the housekeeper is more important to cleanliness and the avoidance of

infection than the control of vermin. In handling this problem an ounce of prevention is worth a pound of cure. The old institution thought of rats, mice, cockroaches, bedbugs, flies, and mosquitoes as necessary evils to be vigorously combated in order that they might not run away with the house, but probably never entirely to be eliminated. The modern point of view is that if these pests do not enter the buildings there will be no problem of exterminating them. Far from being patient under afflictions, hospital officials consider that one such biological specimen is one too many. They check the buildings to discover the avenues of entrance of rats and mice and to eliminate as far as possible their routes of travel within the building. The grounds, and perhaps the neighborhood, are checked for the breeding places of flies and mosquitoes. With the disappearance of stables, flies are less numerous in cities but there still are enough to cause concern. Screening should be carefully watched and repairs should be made immediately.

In spite of the greatest precautions, however, vermin enter the hospital and it becomes the housekeeper's problem to eradicate them. She will use different methods for different pests. The campaign against flies and mosquitoes will be waged by the whole hospital personnel, with newspapers and spray guns, which the housekeeper will have distributed generously enough so that they are conveniently available. Bedbugs are usually not a major problem if they are reported promptly, while only one bed is infested. If the bed is properly constructed so that the bugs cannot get inside of the pipe frame, washing will suffice for the bed itself, while the mattress can be either sent to the sterilizer or thoroughly exposed to the sun. In some communities the city health department maintains a rat catcher who will assist in ridding the premises of rats and will advise in ratproofing operations. If the control of those most persistent pests, the mice and the cockroaches, proves difficult, a competent exterminator employed on a monthly contract will be worth more than his services cost.

The maintenance of hospital asepsis, then, as it affects the housekeeping department, becomes a question of people rather than of things. Little is needed in the way of equipment but a great deal is needed, qualitatively speaking, in the way of personnel. The department head must have a sound knowledge of her subject based on theory as well as practice and an alert mind so that she will not "strain at a gnat and swallow a camel." She must be supported by an intelligent group of employees whose working conditions and wages are such that labor turnover is reduced to a minimum in order that she may train them adequately. The teaching ability of the housekeeper and her opportunity for effective instruction seem to be the foundation stones on which success in this field must be built.

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CHAPTER XXV. LAUNDRY MANAGEMENT AND LINEN CONTROL

I. The Laundry Manager Should Route the Work, Train the Worker, by *W. A. Reinhard**

THREE basic factors may be said to influence laundry plant production: proper methods, skill of the operator, willingness and effort of the operator. These factors can of course be further subdivided. For example, the first will be composed of machinery, layout, condition of equipment, and working conditions. For "skill" the subdivisions will be proper training of the operator, and time and motion study. This article deals only with proper methods and skill.

The first requisite for production efficiency is the proper arrangement of machinery for the plant layout. Every step operators take costs money; hence, the fewer the steps, the lower the cost. The number of steps taken is, of course, governed by the arrangement and location of machinery and equipment in the plant. The necessity for giving plant layout a great deal of study and contemplation thus becomes apparent. Under the pressure of getting the work out, one is apt to forget that if a machine is misplaced, in respect either to other equipment or to the convenience of the operator, continuous lost time results.

The ideal laundry would naturally be laid out in such a way that all flow lines would be direct, and each operation sending the work through the plant would follow in direct order. Also, the distance between operations would be as short as possible. In most plants it is difficult to realize this ideal, but the closer such a condition may be approximated, the smaller will be the loss due to unnecessary steps. The institutional laundry is in many cases allotted whatever space may be available in the institution, regardless of location. In some cases it is given several separate rooms in the basement, an arrangement which necessitates a continual trucking of work.

The first and most important consideration in the proper layout of the equipment is the relationship of one department to another. In some plants there are many places where the main flow of work will digress from the most direct line. Often it doubles back and forth several times. This condition may go entirely unnoticed by the management merely because no plant study has ever been made in terms of flow lines and routing of work. If the manager will make a point of looking for all such back-tracking, he may be surprised at what he discovers.

The second step in production analysis, after the departments are straightened out in the proper flow line, is that concerned with the proper flow in the individual departments, so that the secondary flow of work through each department will parallel in the same direction the main flow line. Then, after any faults in the layout of the plant have been un-

* Adapted from *Mód. Hosp.* 47:69-70, July 1936. Mr. Reinhard is manager of the Engineering Department, American Institute of Laundering, Joliet, Illinois.—Editors.

covered, the management must take action. The degree of inefficiency, loss in time and motion, and unnecessary labor caused by the existing conditions may readily be determined. It is then essential that all possible ways and means of rectifying the faults be determined.

One of the paramount considerations is the expense of moving machinery and making the necessary arrangements. Moves that will be the least expensive and afford the greatest saving should be undertaken first. In many instances it will be found that the rearrangement of small, light equipment, tables or departmental units which can be easily moved, will give the maximum results.

Certainly another important factor is the maintenance of equipment in good mechanical working condition. When a machine is designed to operate at 100 pounds steam pressure, it is well to carry this pressure, or a pressure closely approaching it, in order to obtain highest efficiency. Machine efficiency is dependent upon keeping the machine hot, properly padded, and mechanically in order.

The factors just discussed in connection with machine efficiency have much to do with production. However, in the laundry we must have operators to handle the machines. Naturally, we must have both operator and machine efficiency in order to have a well-balanced laundry production unit. The problem of obtaining operator efficiency is probably the most difficult task of all in the attainment of increased production. At the same time it is by far the most important. An operator cannot be efficient unless she is skilled in the particular operation that she is doing. The most effective way to increase the skill of the operator is by proper training in time and motion study. Training in the laundry industry has generally been left to the floor lady or a supervisor in the particular department in which the employee reports. Management often pays little attention to the important item of training the new employee as well as further training old employees. Training is a continual process and offers the same opportunity for financial gains or losses as any other job, depending upon the efficiency with which it is carried out. When instructing the operator, it is not wise to do the operation as quickly as possible at the outset. A better method is the demonstration or development method by which the operation is first gone through step by step in the best instructional order, with the simplest, safest, best-known process. The operator should then be encouraged to try her own hand and to ask all questions that may occur to her. If an operator forms a habit of doing a particular operation in a faulty manner, it will be twice as hard for the management to correct this fault after the habit becomes fixed as it would have been to train the operator in the correct method at the beginning of the training period. In other words, do the job right at first and have it done for all time.

During the process of training the operator, the instructor should explain clearly the various reasons why the method is composed of the motions demonstrated, and point out carefully the time required by excess motions, showing how this will in turn influence the operator's pay roll check. During the period of instruction, it should be impressed upon the operator that proper method rather than speed in production is the immediate aim.

She should be encouraged to acquire speed through practice in sticking to habit. She must learn to produce a good quality product at a good production rate, thus enabling the management to produce an article at a fair cost and in turn pay the operator a fair hourly rate.

2. Checking Financial Leaks in the Hospital Laundry*

PERHAPS the institutional laundry represents a department that receives in proportion to its importance less actual supervision by the superintendent than many other divisions less necessary to the physical comfort of the patient. Many a small institution, faced with the necessity for replacing or rebuilding expensive laundry machinery, is even now seriously debating the question as to whether laundry service cannot be purchased cheaper than it can be supplied by the hospital itself. Sometimes a situation arises whereby the patronage of a local laundry by the hospital is expected, if not actually demanded. To some, the *quid pro quo*, the natural reward expected for contributions to the hospital, is that all purchasing be done locally. A hospital has no such obligation. If in the case of the laundry, it can be proved that the institution can save money by performing its own work, its board is under a moral obligation to do so.

Of course, the size of the hospital and its clientele, location, and financial policies will largely determine the wisdom of altering present laundry practices. Nevertheless, in hospitals of even 50-bed capacity, there is little question that linen can be laundered more cheaply, more efficiently, and with greater consideration for the peculiar needs of the hospital, than the same service can be supplied by a commercial institution. The superintendents of some hospitals, however, have yet to learn that the mere purchase of efficient machinery in no way guarantees an economical service. The proper supervision of laundry work is a necessity to ensure an economical and effective supply of clean linens. The laundry supervisor must have had practical experience in the same measure required of the surgeon, the nurse, or the x-ray technician. To select as a laundry supervisor a woman who has demonstrated her ability to maintain her home in spotless condition, thus assuming that she will be able efficiently to conduct an institutional department, is an act of folly. To place in charge of this department an experienced graduate nurse is wasting abilities that should be utilized elsewhere and does not guarantee effective laundry supervision. And yet some of the best laundries in the hospital field are supervised by nurses.

These statements apply in less degree to all persons employed in the handling and washing of linens. It is a common practice to engage for laundry work a grade of help of rather low mentality, because such persons will be willing to undertake unpleasant tasks for a meager recompense. Why should it be expected that in the laundry low-grade and poorly paid help will give efficient service, when no such result would be expected elsewhere? Money can be wasted here with equal if not greater regularity than in many other hospital departments, even though wages are low. In addition linens are relatively expensive, and since negotiable or usable, are frequently misappropriated, as will be mentioned later.

* Adapted from Practical Administrative Problems Series, *Mod. Hosp.* 39:85-89, Aug. 1932.

The initial cost of equipment of the laundry will vary from \$100 to \$125 per bed. This cost will depend not only on the size of the hospital, but also on the number of pieces of laundry required per bed per day. Ten pieces per bed per day is a fair average for services treating acute conditions. An average of 12 square feet of laundry floor space per patient should be supplied, and this important activity should be far removed from basement or sub-basement areas.

It may be safely asserted, therefore, that a hospital of even 50 beds can and should conduct its own laundry under ordinary circumstances. Some institutions even of this size have saved from \$100 to \$200 a month by doing their own laundry instead of having this work done. And yet there are hospitals in smaller towns that are still purchasing laundry service on a per piece or a per pound basis. Commercial laundries are of course desirous of obtaining this type of work because of its constancy and because of the possibility of receiving the soiled linen in large consignments at fairly regular intervals.

The cost of providing clean linen varies, of course, with the bulk of work performed. In one large city hospital laundry operating on a basis of 125,000 pieces a week, it was found that the cost per piece was 0.25 cent, a rate that would in all probability be impossible to obtain from a commercial institution. In smaller institutions, this figure ranges from 0.6 to 2.5 cents a piece. The difficulty in evolving any reliable cost figures in regard to the laundry arises from the fact that in the majority of hospitals the bookkeeping system does not make possible such an accurate computation. Moreover, the costs of labor, soap, supplies, power, and even water vary so greatly that no standardization of these costs, which would be particularly useful to the average superintendent, can be determined.

Attention should be directed here to the fact that rigid economy on expenditures for the inspection and upkeep of laundry machinery is often an extravagance. In many instances, leaking washers are found to waste in the course of the year much more money expressed in terms of soap and other materials than would be required to place and maintain these machines in proper condition. It is not an uncommon experience for a trained laundryman to inspect a hospital plant and find that needless waste is taking place. With soap varying from eight to ten cents a pound, the amount of money thus squandered quickly mounts to surprising figures.

Even with the frequent occurrence of such losses, repeated instances of the saving of money by the hospital in conducting its own laundry can be cited. In a New England institution of 100 beds, the cost of having laundry work performed by a commercial laundry averaged about \$10,000 a year. After the installation of laundry equipment at a cost of approximately \$11,000 the saving per annum was about 20 per cent. In another hospital of 80 beds, in the south, about \$1,200 a year was saved by installing a hospital laundry.

Any superintendent sending linen to a commercial institution should closely study cost prices, and even though in this time of money shortage it would be necessary to borrow from endowment funds or elsewhere to construct a suitable laundry department, it might still represent an act of good business. The stoppage of this leak might easily eventuate in the saving of thousands of dollars annually. It is suggested that in institutions owning

their own plants a semiannual inspection by a trained commercial laundryman of the actual methods employed in the handling of various standard articles would in all probability be worth much more to the institution than the relatively minor cost of this service.

One frequently observes the grossest misuse of high-grade woolen blankets by the hospital laundry. On delivery from the wholesaler, they are light and fluffy and present an inviting appearance, but after the first visit to the laundry, because they have been washed in water of the wrong temperature, exposed to the action of soaps not adapted for this particular purpose, or dried and ironed by being passed through a press, they become hard and not only uncomfortable to the patient but unsightly in appearance. Why hospitals will persist in wasting money by thus depreciating the value of such expensive articles as high-grade woolen blankets is difficult to understand. The same statement may be made in regard to table linens, stand covers, towels, and even sheets and pillowcases. Staining caused by carelessness in the use of disinfectants and antiseptics and by employing linen articles for other purposes than those for which they were designed and even the actual mutilation of such expensive linens as sheets, pillowcases, napkins, and table linen, eventually result in a huge figure representing an unnecessary annual loss.

Few hospitals have made a thorough study of reclamation methods as applied to their linen supplies. The gowns of nurses, the suits of resident physicians, and the uniforms of orderlies in many cases present an untidy appearance, because of clumsiness and lack of direction in their laundering. In many instances there is no apparent system that diverts torn spreads, sheets, tablecloths, and towels from routine channels, and that in the natural course of events brings about their repair before they are allowed to reenter circulation. All such inexcusable extravagances only reflect the need for a businesslike supervision in the handling of linens. Unless the superintendent makes it his business to acquaint himself thoroughly with the basic chemical principles involved in the process of laundering and unless he takes more than a casual interest in the work of protecting his linen supply against loss or misuse, major leaks creep in for which there is no valid excuse.

One even observes in many hospital laundries a trusting attitude in regard to theft, which is really pitiable. In one of the largest and oldest institutions in the field, it was recently discovered that laundry workers who were permitted to bring in their own personal linen for washing during noon-time and after closing hours were the source of a major loss to the hospital. No attempt was made to inspect the contents of the suit cases containing the personal linen on the employees' way out. When attention was drawn to this possibility of loss, it was found that hospital linen valued at \$2000 was thus being diverted from its proper use annually.

The proper operation of pressing machines for the ironing of uniforms and nurses' clothing is another method of saving money. Each operator should care for at least two presses and should iron something in excess of 12 pounds an hour. If this type of work were sent to a commercial laundry, ironing alone would cost in the neighborhood of from fifteen to twenty cents a pound. It can be seen in this single instance that the hospital, even though it pays living wages to its operators, should be able to save in one operation a con-

siderable sum of money. Moreover, in smaller institutions, attention should be directed to the fact that if a laundry is properly equipped, it will not be required to run more than five or seven hours a day, and that a heavy-duty type of machinery may not be necessary. In consideration of this fact, some money might be saved in the equipment of the small laundry plant as compared with that designed for commercial operation.

Few hospital administrators have carefully gone into the matter of chemically analyzing the water employed in the laundry. To many, the degree of hardness of water is but a name. To those who are really interested in the chemical principles involved in washing linen, the matter of saving money through the installation of equipment designed to soften water presents no new problem. It has been repeatedly called to the attention of the institutional field that the chemicals water carries in solution determine its degree of hardness, and this saturation may vary from 5 to 40 degrees of hardness. Moreover, when it is remembered that in water of 5 degrees of hardness, 8 pounds of soap are needlessly destroyed per thousand gallons of water and that in water of 40 degrees of hardness, 68 pounds per thousand gallons are destroyed, it is easy to compute that the loss thus entailed varies from 85 cents to \$6.80, with soap at ten cents a pound. While water softeners are not inexpensive, it would not be difficult to compute from the foregoing facts the probable wisdom of installing them.

It has been repeatedly pointed out that the percentage of saturation represented by salts in solution in any given water supply varies from month to month. The precipitation of chemicals can be brought about in a number of ways. But the rationale and technique of employing some type of softener, while comparatively simple of explanation, do not appear to be pertinent to an article of this type. It should be sufficient to remark, however, that the degree of hardness, the temperature of the water, the type of soap used, and the efficiency of the precipitating apparatus employed are matters that demand careful study by the hospital executive, and that, if defects are found, result in a rich reward in money saved in comparison with the trouble necessary to bring this about.

To discover in the hospital a printed laundry technique that is carefully followed is the exception rather than the rule in most institutions. There seem to be too many "cut-and-dried" or "hit-and-miss" methods in use here. No wonder that one frequently hears the complaint that the expense of washing linens is excessive. Equally uncommon is the practical application of simple chemical rules in regard to the removal of stains. The common use of dyes in the sterilization of tissues has often resulted in a deplorable appearance of hospital linens. Stains made by these and other solutions employed in the surgical department can often be removed if intelligent steps are promptly taken. Even the removal of blood stains on linen and of coffee and food stains frequently is neglected, and no intelligent effort made to restore these linens to their original appearance.

The procedure commonly adopted in the handling of hospital linens is that when a shortage occurs, the directress of nurses forwards a long list of required linens to the office of the superintendent, who blindly and unquestioningly, although somewhat aghast at the expense, approves the purchase of more expensive supplies. Under the average hospital

system no intelligent effort is or can be made to learn what has become of the linen being replaced.

There are superintendents who, because they have not thoroughly studied the problem, disdain the adoption of any system of counting. It is said that to count linen accurately and effectively requires more money than would be necessary for the replacement of lost linen. This statement is open to argument and is believed by many to be based on an incorrect belief or on a lack of information concerning the cost and nature of the steps whereby such a loss can be avoided. In the hotel it is less possible to check on the loss of linen than it is in the hospital, although a close analogy may be drawn between the difficulties experienced in the handling of linen in the hospital's private department and that supplied to the rooms of a hotel. There is, however, no excuse for the superintendent of the hospital neglecting to adopt some method by which theft and misuse of linens can be prevented.

Practically, there is perhaps no more efficient method than that known as "the direct exchange system." To describe this procedure would require more space than is available in this article. It may be said, however, that the principle of this system contemplates the replacement of each soiled article with a clean one, and that to put this plan into force it is necessary for a standard of necessary articles to be set up for each type of service in the hospital. A central linen room, acting as a reservoir, and also containing under its administrative head the repair and new-linen storage room, completes the equipment. In this particular system of handling linen, it is possible at the end of the day to form an accurate estimate of the amount of linen that has been lost, misplaced, or misused, and definitely to fix responsibility. It is also possible, if the proper marking system is employed, accurately to estimate the length of time during which each piece has been in circulation. This makes it possible to formulate some ideas as to the wisdom or lack of it involved in the purchase of the grade of linen being supplied by the administrator. The experience of many trained hospital executives has been that the installation of such a system makes possible intelligent purchasing and also curtails the practice of stealing in so far as the linen supply is concerned. Such a system also automatically removes from circulation torn and otherwise unusable pieces, provides for their repair, and replaces them in circulation, a great improvement on the sporadic attention this matter often receives.

Since the practice of reclaiming gauze is related to the conduct of the laundry, a brief discussion of the possibilities for saving involved in this procedure may be set down here. As is the case with counting linen, there are hospital administrators who scoff at the idea of realizing any return on the practice of rewashing and reusing soiled hospital gauze. To be sure, there are certain factors that affect the advisability of adopting this practice. Gauze coarser than 24 by 20 mesh probably does not lend itself to reclaiming.

Various practical methods have been worked out by hospitals that have adopted gauze reclamation. Roughly, it may be said that badly soiled surgical dressings should be discarded, but outside dressings, gauze used for bandages and gauze employed in padding or holding splints in place, certainly can be reused. Each dressing cart on the ward may have attached to it bags labeled as "Washable Gauze" and "Waste Material." Pus-soaked or

other badly soiled gauze should be placed in the latter container and incinerated. That which lends itself to reclaiming should be placed in the washable gauze container. In the operating room, dispensaries, and other localities where gauze is used, the same method of collection is employed. Daily, a representative of the laundry visits these departments and collects gauze marked for reclaiming. Incidentally, the collection of gauze in this manner often brings about the salvaging of scissors, hemostats, gloves, and other articles that have been carelessly discarded. Upon its arrival at the laundry, the gauze is taken to a sorting room where it is again inspected and that too badly soiled or of improper type is discarded. It is then held in the sorting room until a sufficient amount has been received to fill one washer. The washing formula varies in different hospitals; some use nets, others place gauze free in the wheel. Gauze properly treated can be rendered as sterile as that recently purchased. The matter of spreading these gauze fragments out on frames for drying is perhaps the most expensive stage in this process. This, however, can be economically performed when we compare its cost with that of the purchase of new gauze.

In endeavoring to learn the number of yards of gauze per pound reclaimed, the figure 19 has been evolved as a ratio by those who are experienced in this process. The number of pounds of gauze reclaimed multiplied by 19 should approximately equal the number of yards of gauze thus salvaged. In one institution, it was found that a worker could card approximately 500 yards per day. Another reported that 300 yards, and still another 350 yards, per worker could be carded in a working day. From these figures it is not difficult to compute, at the current price of gauze, the earnings of any one worker during an eight-hour period. Saving money by reclaiming gauze rightfully deserves the attention of administrators of institutions that have up to the present failed to investigate its possibilities. This practice is not new, but in many hospitals the possibilities of saving in this way have been overlooked.

In suggesting methods by which financial leaks may be discovered and checked, attention has been particularly directed to the laundry department. It is not considered advisable to hire the cheapest type of help in the hospital laundry, although this is a common practice. Here, as in many other places, intelligent workers represent a good investment. The possibilities for saving money are not entirely confined to the laundry, in so far as the linen problem is concerned. The laundry, however, should be held responsible for all linens, whether they are in the washer, in the course of transportation to and from the wards, or in some instances even on the ward shelves. The members of the hospital personnel, particularly doctors and nurses, have yet to learn that hospital property of this type deserves the same careful supervision at their hands as it would if it had been purchased with their own money.

3. Laundry Forms and Reforms, by *G. F. Stephens, Jr.**

No hospital administrator can afford to be uninformed regarding volume of work and production methods in his laundry. Some administrators may require a weekly or monthly

* Adapted from *Mod. Hosp.* 51:90-92, Oct. 1938.

report showing the number of persons at work in the laundry, but as a check on the efficiency of the laundry, such a report is usually not of much value.

At the Christ Hospital, laundry reports are a helpful means of exercising administrative control and supervision. This report (Figure 1) reaches the superintendent's desk each Monday morning. It is not intended as a substitute for the laundry expense account in the

POUNDRAGE FOR WEEK				
	HOSPITAL	PERSONNEL	Total This Week	Total Last Week
Flat Work				
Tumbler Work				
Press Work				
Total				
DAILY POUNDRAGE			PER EMPLOYEE HOUR	
DAY	Number This Week	Number Last Week	This Week	Last Week
Monday				
Tuesday				
Wednesday				
Thursday				
Friday				
Saturday				
POUNDS PER EMPLOYEE HOUR-WEEK				
TOTAL EMPLOYEE HOURS-WEEK				
CONSUMPTION				
			This Week	Last Week
POUNDS PER PATIENT DAY - HOSPITAL				
POUNDS PER PATIENT DAY - TOTAL				
TOTAL PATIENT DAYS				
TOTAL EMPLOYEE DAYS				

Supervisor

FIGURE 1. A FORM FOR THE WEEKLY LAUNDRY REPORT THAT IS GIVEN TO THE SUPERINTENDENT ON EACH MONDAY MORNING. IT ENABLES HIM TO KEEP A CONSTANT CHECK ON OPERATIONS IN THE DEPARTMENT

monthly financial statement but serves as an up-to-date check on operations in the laundry department. If the administrator must depend on the accounting department's monthly statement as the only means of checking irregularities, an undesirable condition arising early in the month may not be detected for as long as forty days after it occurs. But with this form of weekly report the administrator is kept informed of current trends and happenings in the department and can take prompt measures to make adjustments leading to increased efficiency and economy.

The foundation stone of the weekly laundry report is the weigh scale, on which all soiled linen is weighed before it is taken to the washers. Until its installation seven months ago as a preliminary step in the reorganization of our laundry, no statistics were available as to the volume of work being turned out. While some may prefer to count the number of pieces being put through instead of using the scale, we feel that weighing is the more satisfactory method.

Our capacity is 300 adult beds, and a central linen room supplies all departments. The procedure is to bring the soiled linen to the sorting room and sort it into the various classification bins. Then when the washman is ready to wash a load of sheets, for example, he loads his truck from the sheet bin, runs the truck onto the scale, and records the weight of the load on a daily weight sheet, putting the figure in the proper column, that is, hospital or personnel work, flat work, tumbler work, or press work. The weekly report is compiled from these daily weight sheets, and is broken down into two sections, production and consumption. In the production section the total amount of work done in each of the major classifications is recorded.

Next we have the total daily poundages, with comparable figures for the previous week and the daily average number of pounds per employee hour for the current and previous weeks. The latter is our efficiency index and is summarized in the figure in this next line, the average number of pounds per employee hour for the entire week. Our final figure in this section is the total number of employee hours worked in the department for the current week and the comparable number of hours for the previous week. The second section of the weekly report contains figures on the amount of linen consumed. Here is recorded the number of pounds of linen used per patient day, first, patient or hospital linen, and second, the amount used by both patients and personnel per patient day. Below this are given total patient days for the week and, again, the comparable figure for the previous week. On the next line appear total personnel days for the current and previous weeks. At first sight this report may appear to be a bit complicated but actually it is completed each week by the laundry supervisor in half an hour.

After two weeks' use the weekly report told us a number of valuable things. The laundry personnel had been complaining that they were working too hard early in the week and the report proved that this was true. About 8900 pounds was being processed each Monday, while by Saturday the load had decreased until only 4050 pounds was being processed.

Even with the high production early in the week there were complaints from the floors

that the Monday supply of linen was inadequate. Check of the weights of each washer showed that some were operating above washer capacity while others were operating below capacity. If the washers are overloaded, the result is a poor quality of work. If they are underloaded, the same quantities of soap, labor, water, power, and steam are required as for a full load, thus increasing the cost per pound. The number of people employed in our laundry was based on the maximum load, that is, on the Monday volume. Despite the fact that the volume was much less later in the week, we had the same number on the job. The idea was that provision had to be made against a sudden increase in work. Consequently, on a slow day the laundry personnel would stretch the work out to make it last and the efficiency of the plant suffered accordingly.

Having sought and found the chief defects in our laundry we were ready to do something about them. A principle was formulated. It was this: that the operations of the laundry must be entirely divorced from the hourly demands of the house. When this became an accomplished fact, the laundry would be in a position to work for itself in a manner that would enable it to function most efficiently. To obtain economical operation, each washer would be loaded to capacity, an even production per employee hour would be maintained, and approximately the same amount of linen would be washed each day. This plan permitted a leveling out of daily loads throughout the week.

One problem was to equalize the daily loads. It was decided to put additional linen into circulation. The quantity needed was not known exactly, but, as an experiment, approximately one extra set of bed linen was provided and smaller amounts of other articles. The laundry then commenced to equalize its loads and washed according to a daily quota, which at the present time is about 6000 pounds per day. Figure 2 shows our present daily loads (January 31 to February 5). Compare this with our production before the new scheme was adopted. The low volume on Thursday, about 3650 pounds, is because we have a half holiday. Previously Saturday was supposed to be the half day but, owing to heavy week-end demands, our people often had to work overtime and were dissatisfied. Now that the half day has been changed to Thursday, they really get off on time. Besides an even load from day to day, we are getting more efficient production. Figure 3 shows it nicely. The solid line represents the work done per employee hour before the laundry load was balanced. The dotted line represents the present production maintained per employee hour.

What about the cost of putting that extra linen into circulation and having those soiled pieces stand in our sorting bins? It may be one or two days before the laundry gets around to including them in the daily quota to be washed. If there is more linen in circulation each article is not used or washed as frequently and wear and tear is spread over a longer period.

What offsets the cost of additional linen? First, there are 20 people working in the laundry today, whereas before this new system was in operation there were 23 persons on the pay roll. So we have a saving in personnel of three workers; they were not laid off but were girls who left for various reasons and were not replaced.

In addition to this saving in personnel, we have paid for a complete overhaul of laundry

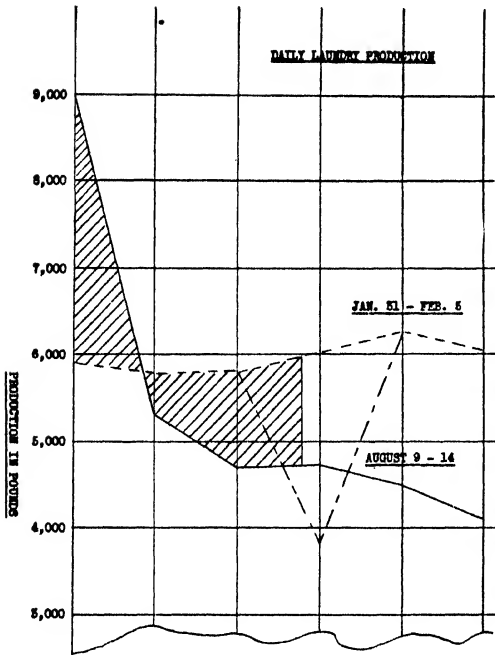


FIGURE 2. GRAPH SHOWING HOW PRODUCTION EFFICIENCY WAS IMPROVED

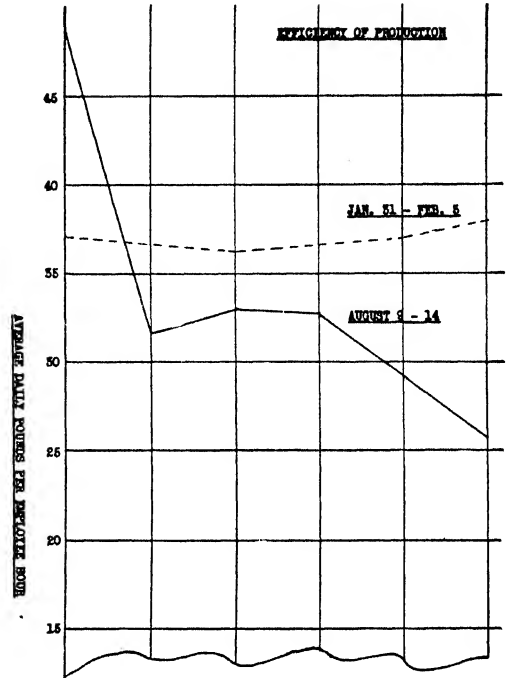


FIGURE 3. GRAPH SHOWING INCREASED EFFICIENCY PER EMPLOYEE HOUR

equipment and for the installation of new sorting bins for the classification of soiled linen. The work resulting from a 12.9 per cent increase in patient days during the year has been processed. In spite of these extra expenditures, there has been a saving in laundry expense of \$200 over the expense for the corresponding months of 1936-37.

Other important benefits are: (1) an adequate supply of clean linen for the care of patients, (2) a reduction in the amount of linen consumed per patient day, and (3) a more contented laundry personnel.

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CHAPTER XXVI. PERSONNEL RELATIONS

I. A Labor Program for Hospitals, *by E. M. Bluestone, M.D.**

A PRIMARY qualification for employment in a hospital is a warm personality which will win the confidence of the patient, yet the precaution of engaging such people for service in hospitals is not always taken.

It is still held in some quarters that those who serve in hospitals occupy a position somewhere between full-paid workers in industry and volunteers working out of devotional motives, and that they should make sacrifices in salary because of the charitable nature of the enterprise. According to this point of view no employee may complain of being exploited, since he entered hospital service more or less out of philanthropic motives. In difficult times this point of view is often responsible for economies at the expense of the working staff. Since the pay roll is the largest single item of expenditure in the budget, it takes but one stroke of the pen to balance financial losses from any other source. This method of producing "economy" is defended to some extent on the ground that the employee serves the hospital partly as an act of charity, thereby enabling the hospital to maintain itself at lower costs than prevail in industry. The employee's contribution is thus increased at the expense of his income. In a situation like this the worker becomes a philanthropist in a double sense, since he renders philanthropic service at the bedside and also out of his pocket.

A study of working conditions in hospitals generally leads us to the conclusion that, with the exception of hospitals that are served by full-time volunteers working under devotional inspiration, all work done by the nonprofessional staff, where there are no other benefits to an employee, should be done on a full salaried basis. The philanthropic element in hospital work is obvious in the act of service to the sick and no further contribution should be required of the employee out of his salary. A rapid survey made among a selected group of hospitals indicates, in the opinion of the governing authorities of those hospitals, that nonprofessional employees are paid noticeably less than they deserve for the work they are doing. For the benefit of the sick whom they serve, hospitals should secure the right type of employees and give them a reasonable income for their work. Such a change could and should be brought about without delay. All hospitals should study their own labor situation carefully from this point of view, take counsel with each other as well as with the contributing public and the public authorities responsible for employment in public hospitals, and make whatever corrections may be found necessary. In some instances hospitals may borrow the best practices of industry.

The tendency to strike and threaten to strike against the interests of the sick in order to enforce demands which may or may not be reasonable must be condemned by public opinion, if not by the public authorities. The development of a finer sense of responsibility

* Adapted from *Mod. Hosp.* 48:43-45, Apr. 1937.

on the part of hospitals generally toward their workers may be noted with some satisfaction, and improvements will doubtless be made without the influence of the picket. In the hospital we deal with no stockholders, no commercial profits, no dividends, and no merchandise other than human suffering which must be relieved largely by charity in its broadest sense.

While it is hoped that the grievances of hospital workers will shortly disappear as a result of a more enlightened attitude on the part of each side toward the other, we realize that differences of opinion will continue to exist, while efforts are being made to reduce them to a minimum. For judicial purposes we have at our disposal the law of the land, the public authorities who control the disposition of tax funds, and the united philanthropic organizations which are in better position to deal with controversial situations than hospitals are individually. In New York City, such organizations are the United Hospital Fund, the Catholic Charities, and the Federation for the Support of Jewish Philanthropic Societies. We must never forget that the hospital is represented by philanthropy on both sides, the employer being the trustee of philanthropic funds and the employee being credited with philanthropic motives that draw him to offer his services at the bedside of the patient.

It is strongly recommended that hospitals generally create special committees on employment among their governing bodies to take sympathetic and continuous interest in problems relating to employment. Apart from any other consideration, this seems to be required by the fact that the pay roll is the largest single item of expenditure in the hospital.

Representing the board of governors on the one hand and the working staff on the other, the administration should be approachable and willing to concede the contribution of labor to hospital service. Individual employees should have ready access to their immediate superiors, as well as to the administration, for the discussion of complaints and, wherever this is the choice of the complaining employee, through a committee of his fellow workers within the organization and familiar with it. We have had reports from representative hospitals where this method has been adopted and are satisfied that this is the most workable.

The qualifications of an applicant for employment in a hospital should be looked into with much greater care than is common at present. Confidential references should be furnished and accepted with the greatest care and with full regard for the interests of sister institutions. Wherever employees without specialized training are accepted for specialized work, such training should be provided and the salary of the worker adjusted accordingly. Hospital work being different in practically every phase, an educational program for employees should be prepared and the duties of each one carefully outlined and explained.

Labor turnover in hospitals generally is excessive and can be largely avoided by more careful attention to employee needs. This appears to be a chronic condition and unfortunately is too often accepted as a matter of course. The best interests of the sick obviously require the presence of a permanent, well-tried, and well-trained personnel.

Sources of labor supply should be known in all their possibilities. Only responsible

agencies which work honestly and cooperatively should be patronized, and candidates for employment should be free to forward their applications through any legitimate medium which they may choose. Selections must be made on merit only and with primary regard to the needs of the sick. Partiality or priority in any form should be condemned. Political considerations should never govern an appointment or interfere with the work of an employee.

From the outset, the exact duties of an employee should be clearly known, preferably put in writing. The hospital should stand ready to pay for extra work in accordance with a reasonable scale, and the worker should understand that hospital service may not always be of a routine nature and may call for extra work in emergencies for which he as well as the hospital should be prepared.

After a reasonable period of probation, every worker should be given a sense of security in his position. This will vary according to the needs of the hospital and its service to the patients. Hospitals contract and expand in accordance with the needs of the community, and employees' schedules must take this phenomenon into account. At all times employees should give and receive a reasonable period of notice of resignation or discharge. In lieu of notice of discharge, a cash salary for the period should be paid, the notice period depending entirely on prevailing practices in industry which in instances like this hospitals should follow.

As far as possible, promotion should be made from the ranks and seniority should be recognized, except in instances where the requirements of the patient are such that newcomers to the working staff and younger employees are able because of experience, personality, or for any other reason to render such service better.

The cash salary of an employee should be adjusted in accordance with prevailing economic conditions and without taking a discount for philanthropic service rendered. In making this adjustment the maintenance factor must be taken into full consideration. We find a disposition on the part of many, mostly among employees themselves, to regard maintenance as an item which is "thrown in" without much extra cash outlay by the hospital. This point of view is faulty since maintenance has a definite cash value. However, maintenance should be furnished employees for reasons relating to the convenience of the patients and not primarily for reasons of economy. Employees who may be needed for service in the hospital during the night and who for any other valid reason must sleep on the premises should be housed by the hospital. An adequate cash equivalent should be allowed to all others, whose place of residence with respect to the location of the hospital should be taken into consideration in allotting the allowance.

Maintenance, generally speaking, should include (a) a room, preferably single, but double only in those cases where the room is large and well ventilated; (b) at least three substantial meals a day, planned at a certain minimum, to which additions should be made for those who engage in heavy physical work (for employees who are given maintenance, all meals should be served in the dining room); (c) laundry of a reasonable quantity of personal linen; (d) incoming telephone service at all times, except during work hours

when only emergency calls should be put through; (e) extra facilities in individual rooms such as radio outlets and bed lamps; (f) uniforms; (g) medical care over reasonable periods, in accordance with prevailing practices in industry; ward beds, separation rooms, semiprivate rooms, and private rooms should be made available for this purpose, depending on the rank of the employee and the availability of beds. Thorough physical examination should be made in every case of employment, and periodically thereafter as indicated.

For employees not provided with full maintenance, it is advisable to serve lunch in the dining room of the hospital if there are valid reasons for retaining the employee on the premises during the lunch hour. In other instances the cash salary should reflect a reasonable increase for the meal or meals through which the worker serves the hospital. The length of the meal period should follow prevailing practice in industry.

Salary scales should be adjusted from a minimum up, depending on education, ability, conscientiousness, loyalty, length of service, position held. It does not appear to be desirable in hospitals to follow a salary scale too closely, because of the differences in work that exist even in positions which appear to be similar. For such work as is done in the house-keeping, engineering, purchasing, and accounting departments, salary scales may be borrowed from industry. In all other positions, however, hospitals will have to find reasonable levels after consulting with each other, as outlined above.

Employees should be paid at frequent intervals, preferably fortnightly, and in the safest way for both sides, that is, by check if these can be cashed without great inconvenience to the employee. A period of two weeks' sick leave and two weeks' vacation should be allowed, with pay, to all employees in the nonprofessional classification, after the completion of every year of service and at a time most convenient for them, subject to the needs of the hospital. Leaves of absence without pay should be granted at the discretion of the administration in deserving cases, provided the service can be adequately covered.

Hours of work per day should follow the lead of industry, but due allowance should be made for the needs of the patients. Hospitals should, as far as possible, plan an eight-hour day for employees, but the fact should be recognized that in many instances these working hours cannot be consecutive without injury to the patients. One full day off a week should be the minimum. It follows from this that an adequate number of employees should always be on hand to serve the hospital. No one leaving the employ of the hospital, whether as a resignation or as a discharge, should depart without the so-called "exit interview" by a responsible officer of the administration. Only by personal contacts of this sort can we hope to achieve a contented and stable personnel.

All of the benefits of the prevailing social security laws of this country should be given to hospital employees, regardless of the charitable character of hospital work, since only by providing reasonable insurance benefits against illness, old age, unemployment, and death can we obtain the best service for out-patients. Hospital employees should enjoy a corresponding and proportionate benefit of all increases in hospital income.

It is, indeed, desirable, in order to increase hospital income for this purpose, to stress the

needs of hospital employees in appeals to the public for funds. It is important for the public to be aware of its partnership in the enterprise and to know that hospital expenditure must not be increased without an adequate financial *quid pro quo*. If the public wishes the pay rolls of its hospitals increased, as it should be educated to wish, it must provide the where-withal.

2. Personnel Management in the Hospital, by *Frank J. Walter**

DURING the nineteenth and twentieth centuries, business enterprises have expanded greatly in volume, from the small shops with few employees to the great industries now employing an army of workers. This growth in the size of industries has created the problem of personnel management, which practically all the large industries have recognized and have established special departments to handle. Because of the fact that the hospital's expansion has been much slower and in view of the nature of the hospital's work, the problem of personnel management has not reached the extent which it has in other enterprises. But at the present time many modern hospital administrators recognize this problem and are giving it their attention. In the industrial field this work has been turned over to trained administrators, but the employment of a trained personnel manager to handle the personnel problems of the hospital has not been universally adopted in the hospital field. Most of the hospitals of the United States are too small to afford the additional overhead of such an office, and, moreover, a great deal of the burden of personnel management has already been placed upon the department heads and the administrator. However, it would be well for the hospital whose personnel is large enough to warrant doing so, to seriously consider this plan which has been found worth while and profitable in the fields of industry.

Because of the complications which have arisen in society and its industrial relations, the government has imposed regulations; and any consideration of the subject "personnel relations" must necessarily give due consideration to the legislative regulations regarding the employee and the employer. Since individual employers are interested only in the laws which are in effect in their own states, no attempt will be made to discuss the local state laws except a few general principles which are accepted in every commonwealth.

Hospitals cannot isolate themselves, as the effect of the workers organizing in the community will reflect itself among the workers of the hospital. And benefits gained by employees on the outside will be demanded by the employees of the hospital doing the same type of work.

The Social Security Act grants to employees of industries unemployment insurance and old age pensions. Under the provision of this Act, hospitals are exempt. This Act sets up a system whereby the employer and the employee each contributes equally to a fund which is to provide for the employee a benefit in his old age. The contributions are made on a graduated scale, increasing periodically until the year 1949, at which time the contributions will mount to 3 per cent of the individual's salary to be paid by both the employer

* Adapted from *Hosp. Management* 44:18-20, Dec. 1937.

and the employee. The second part of this enactment provides for unemployment insurance, the assessment being paid only by the employer, not the employee.

Even though hospitals are exempt from complying with the provisions of this regulation, it remains to be seen whether it is wise for them to accept this exemption. Again, competition with outside industries may force hospitals to accept the provisions of this act. If the employees who are working in the commercial industries, and who are subject to the provisions of this Act, accept it as a real benefit, the hospital employees will wish also to be included in its benefits. The loss of mutual insurance protection which was in the past carried by many large industrial organizations for the benefit of their employees, but which was dropped when the social security laws became effective, may in the employee's mind offset any benefits which he would receive from the Social Security Act. Time alone will determine this sentiment.

At the present time there are no national enactments regarding maximum hours and minimum wages. Most of the individual states do have laws at the present time regulating the maximum hours and the minimum wages of employees, at least the women employees. In most cases, with the exception of the professional employees, this regulation does not apply to hospitals. There are also the Workmen's Compensation Insurance Laws, in effect in all states, which require the hospitals as employers to insure their employees against injuries occurring in the performance of their duties. There are also many local enactments, differing for each commonwealth, regarding the manner of payment, liens, and garnishment of employees' wages.

The most perplexing problem of hospital personnel management at the present time is the formation of unions, the recognition of such, and the possibility that employees will strike to enforce their demands. In industry this dispute has taken the form of a conflict between capital and labor, with labor's demands for what they claim is their due share in the profits of capital. In this lies the greatest difference between the hospital organization and the average industrial organization. Most of the hospitals are owned directly by the state or by groups of philanthropic or public spirited individuals or organizations, not for profit but for the purpose of aiding society. In other words, to quote C. Rufus Rorem, "Nearly all hospital capital has been invested on a community basis. The hospitals are social capital." There can be, therefore, no conflict between capital and labor, because there is no capital. Hospitals function equally for the destitute and for the wealthy. Therefore, because of this great difference between hospitals and industries, certain distinctions have had to be made. This has been recognized by the legislatures in enacting the laws, and unions entering the hospital field must also recognize this difference. Both the American Federation of Labor and the Congress of Industrial Organization recognize the difference between hospitals and industries.

Up to the present time, the experience of unions in hospital relations has been very limited, and where charters have been granted, the leaders of the industrial organizations—American Federation of Labor and the Congress of Industrial Organization—are not

very much aware of the local hospital conditions. The attitude of these labor groups has been that they would not sponsor or promote the organization of unions among hospital employees, but that if the hospital workers approached these organizations asking for charters or affiliation, such would be granted. Within the last two years, charters have been granted by the American Federation of Labor and the Congress of Industrial Organization both to the professional groups and to the nonprofessional workers. Some federal hospitals are organized under the National Federation of Federal Employees; and the state, county, and municipal hospitals are being organized under the National Union of State, County and Municipal Employees Association.

The unions present three distinct problems to a hospital: First, the liability of the unions getting out of the control of their national organizations and committing acts not approved by those organizations. Second, the possibility of the strike, which is the union's chief weapon in labor disputes to force their demands. Third, the union's demand for the right to supervise the employing and discharging of employees. A definite example of the first problem was found in the case of the Hospital Employees' Union of New York, Local 171. This Union was a member of the American Federation of Labor, and in spite of the stand taken by that organization—that it would not tolerate strikes among hospital workers' unions—the local representatives caused a sit-down strike in one of the Brooklyn hospitals. Their charter was revoked, as the national organization did not approve of the action of the local representatives, but the fact remains that the strike did occur. Moreover, once a strike is declared, the revoking of the union's charter by the national organization will not stop local anarchy. The *San Francisco Chronicle* of September 5, 1937, states that the hospital workers voted 192 to 90 in favor of using strikes to force their union demands, and by similar votes also favored the use of picketing and boycotting.

During the World War the American Federation of Labor very patriotically and sincerely pledged the support of labor to the successful completion of the conflict; but in spite of the national attitude and in face of our national emergency local strikes did occur.

This leads to the consideration of the second problem created by the unions, the strike. The type of service which the hospitals render to the public is indispensable. An automobile factory may, because of labor disputes, cease production for a month, or a textile mill may stop work for a period of time; but for a hospital to terminate its activities with the suddenness which is done in the industrial disputes would affect the welfare of all its patients.

President Roosevelt recently stated that the employees of the government must not strike. The courts of New York have held in the last few months that it is against the public policy for strikes to be tolerated in hospitals. When an employee accepts employment in a hospital, therefore, he must do so with the understanding that the nature of the work he is undertaking is such that a strike cannot be justified. If this principle is true, then labor's chief defensive weapon, the strike, cannot be used.

Because of the vital nature of the hospital work, the unions' demand that they supervise

the hiring and discharging of employees cannot be recognized. The hospital executives must be free to hire those employees who will give the most conscientious and efficient service to the patients, so that their chances for recovery may not be hindered or retarded. Likewise, the executive must be free to remove from the employ of the hospital any individual who impedes or endangers this recovery through neglect of his duties.

Thus, the problem before each hospital administrator is whether he should oppose, encourage, or remain neutral toward the organization of unions among his employees. In determining his attitude, he should be fully aware of the results of unionizing in his hospital. From the answers of hospital administrators given to a recent questionnaire, the conclusion was drawn that most of the administrators did not realize the effect which unionizing would have upon their organizations.

A superintendent of a hospital which has actually gone through a difficult period with a hospital union declares that considerable thought must be devoted to the matter before formulating a definite program of action to meet forces that may alter the structure of hospital organization and operation. He does not believe that a neutral stand can be long maintained and it is just as well to determine which course will serve the best interest of the hospital and the sick. Referring to a recent decision of a New York court, quoted from the August 28, 1937, issue of the Brooklyn, New York, *Tablet*:

This decision definitely excludes on the grounds of public policy the voluntary hospitals from the operations of the Little Wagner Act in favor of unionization. Because the health of the community, and particularly of the indigent and the needy, depends so vitally upon the ability of voluntary hospitals to carry on, even under constant financial loss, the ordinary conditions which call for unionization cannot be said to exist. By reason of the charitable work done by these institutions, the general public demands of hospital employees a consecrated, disinterested service which is a thing quite distinct from the ordinary relations between employer and employee in industry.

If the hospital does not recognize the place of the union in its organization, and demands the protection against strikes from its employees, then in turn it must assume a much greater responsibility for the treatment and welfare of its employees than that assumed in the industries. The hospital administrator should not refuse to hear and consider the demands made by his employees. It is the employee's right to discuss with the management matters affecting his employment, wages, hours, and living conditions. Hospitals should negotiate with their employees. Most of the outbursts have been caused by the administrator's taking an arbitrary stand and refusing to grant an audience with the employees when they sought to present their grievances and requests. It should, on the other hand, maintain a sympathetic understanding of the employees' conditions, and do everything within its power to maintain reasonable and satisfactory working conditions. If the hospital administration feels that the demands of its employees are excessive and cannot be met, or if the hospital employees feel that they must have additional concessions, both

groups must be willing to subject these differences to arbitration at the hands of impartial and respected arbiters, who have an understanding not only of the hospital's and employees' viewpoints but of the welfare of the community as a whole. Repeatedly it has been demonstrated that arbitration between the employees and the employers was not impossible and satisfactory results have been accomplished, avoiding the disturbances of an industrial dispute. Without doubt, if the hospitals would take the initiative in removing wherever possible any justifiable causes for complaints, the formation of unions would be unlikely to occur. But if a hospital does have questionable conditions, which it neglects to remedy, it is providing an ideal situation for the development of the unions.

We have considered the hospital as differing from the industrial enterprises, from the financial and social points of view. Even with these differences, we cannot be a private industry of our own. The supply and demand for labor affect us just as much as they do the industries. The hours of labor, working conditions, and wages paid for similar employment in industries are bound to affect the hospitals more than the hospitals' conditions and wages will affect the industries. Hospitals make a mistake in comparing wages paid in one hospital with those paid in other hospitals for similar work. They should on the other hand compare hospital wages with those paid in the outside industries for similar work. It is foolish for the hospitals to attempt to pay their employees less than those employees can secure elsewhere, because under that condition the employees will stay only long enough to gain experience at the hospital's expense and then capitalize upon this experience in the outside business world at their first opportunity. There is no need to discuss the losses and other bad results from a large turnover of employees. The hospital should pay not a premium but sufficient wages to obtain and retain the services of the best type of employees to be had. It is a known fact that low wages hire the costliest type of employees.

Supplementary Note

This article was presented six years ago, and at that time Social Security was practically unknown to both employers and employees. Since that time I have taken a more positive stand and feel that Social Security is here to stay, also that the employee should not be penalized (by not receiving its benefits) because he works in a hospital.—F. J. Walter.

3. Employees' Rights Summarized*

THE Chicago Hospital Council, in association with the Chicago Hospital Association, has prepared a statement for hospitals to present to their employees. After pointing out that hospitals are not engaged in interstate commerce and therefore not subject to the Wagner Labor Relations Law, the statement summarized the rights of employees as follows:

1. You are free and requested to discuss with the management in any way you please,

* Adapted from Employees' rights and duties are defined by Chicago Council; sit-down strikers released, *Mod. Hosp.* 48:110, June 1937.

matters affecting your employment. You may discuss such matters personally, or you may select some other individual, committee, or organization to do it for you, if you believe your interests will be better served by so doing. The management acknowledges your right to bargain collectively through representatives freely chosen by you without dictation, coercion, or intimidation. The management will talk with you personally, or will negotiate with the representatives of any group among you so chosen, subject to recognition of the principle that the right to work at our hospital is not dependent upon membership or nonmembership in any organization.

2. You are privileged to join or to refrain from joining any lawful organization. No employee or applicant for employment will be discriminated against because of membership or nonmembership in any such organization.

3. You are entitled to receive wages (including meals, rooms, etc., as the case may be) as high as prevail generally in the Chicago hospital field, for work like yours performed under like conditions, in so far as this is commensurate with the institution's ability to finance its operations.

4. You have a right to hours of work which are as short as the peculiar conditions of hospital service will permit, recognizing that emergencies require overtime work.

5. You will be employed steadily and continuously throughout the year subject only to variations in the demand for hospital service, providing your services are satisfactory.

6. You will receive due recognition of ability, efficiency, physical condition, and personal habits in promotions, necessary lay-offs, and reemployment. Special consideration will be given to seniority and to your social and economic responsibilities.

7. You are entitled to receive health protection through physical examination and immunization, whenever necessary. Due regard will be given the assignment of employees to work they are physically fitted for.

8. Every effort will be made to give you an opportunity either through training or experience to improve your skill so as to enable you to become eligible for promotion.

The statement then pointed out that no one is forced to accept work in a hospital, but if he does he assumes the following responsibilities:

1. To render loyal and efficient service for the full working period specified for your position and to be ready in genuine emergencies to work as long as may be necessary to safeguard the welfare of patients.

2. To follow faithfully the instructions of the hospital management.

3. To do everything possible to promote good feeling and pleasant relationships among all employees, between employees and management, and among the working force, patients, and public.

4. To give reasonable notice of intention to leave the service of the hospital. After giving such notice, the employee should continue at work for the remainder of his stay.

5. To refrain from any joint action with other employees which will cause an interruption of any phase of the hospital's service and to do nothing whatever to jeopardize the safety and welfare of patients.

4. Three Steps in Management of Personnel, *by Nellie Gorgas**

SALARY expense has risen from approximately 50 to 60 or 65 per cent of the total hospital expense today. It is, therefore, more important than ever that the most be obtained from each pay roll dollar. Business, faced with a similar problem, has for some time been analyzing each of its jobs, listing the requirements and qualifications and then insisting upon procuring the proper characteristics and paying only for those qualities that it needs. It also has been giving minute attention to the question of a fair wage for each job. The hospital will gain much by following this lead of business.

In this day of labor unrest, each employee must be convinced that management is cognizant of him and his work and will reward him fairly in accord with his accomplishments. While few workers are definitely satisfied with "dead end" positions, most individuals thrive on definite responsibilities leading to security, promotion, and the possibilities of increased rewards. They want to know where they stand in the organization and what their prospects are.

A personnel officer, or at least the application of his tools and techniques, is fast becoming a necessity in the hospital. Job analysis, the rating of jobs, and the setting of salary schedules are three important steps in proper personnel management. The following suggestions for their application to the hospital field are based upon experience in the University of Chicago Clinics.

The job analysis, or occupation description, is a general survey of the work content, requirements, and modifying factors surrounding each position. It describes the niche the worker must fill. Complementary to it is the qualification card of the applicant. This gives the information regarding the individual under consideration with reference to the niche. It describes his schooling, special training, experience, personal appearance, health, strength, special abilities and interests, and his personal qualities such as age, sex, and marital status. With accurate and complete information available on both the job and the applicant, there is a relatively high probability of hiring the proper person for the job and thus increasing efficiency. The job analysis serves a dual purpose: (1) it provides a detailed view of the scheme of organization of the hospital, sometimes showing defects that may be corrected advantageously; (2) it gives a basis for the setting of salaries. It must include sufficient data so that information on the following factors is available.

1. Job title and department.
2. General duties of the occupation, not the minutiae of each job.
3. Supervision of and by other employees.
4. Machines used that require special skill.
5. Education and special training required.
6. Conditions of work, i.e., physical location, sedentary or otherwise, accuracy required, automaticity, health hazards and likelihood of accidents, number and schedule of hours, and disagreeable factors, if any.
7. Personal qualifications required.

* Adapted from *Mod. Hosp.* 51:43-48, Oct. 1938.

8. Salary: minimum to maximum wage range, including cash value of perquisites, bonus, and penalties, time and method of payment, and vacation and sick leave regulations.
9. Relations to other positions and opportunity for advancement.
10. Source of supply of suitable applicants.

In assembling these data, the use of the questionnaire method is not always trustworthy because it depends upon: (1) the willingness of the worker to provide the facts, (2) his possession of all the information, and (3) his ability to express himself accurately and effectively. If used, the questionnaire must be checked and supplemented by interviews by an analyst trained in the principles and objectives of the study, the technique involved, and the writing of occupation descriptions. If one person does all the interviewing, he may assure definitely comparable data by having in mind results in similar cases in other departments and he may by adroit questioning overcome the personal opinion and prejudice that unconsciously operate in the giving of information of this type.

The analyst should begin by taking from the pay roll records onto job analysis forms the title of each separate job in the hospital. He will be amazed to see how ill-fitting some of the titles are and how many other positions he will find during his study. All of the data which have been listed above relative to each job must be collected and accuracy attained by meticulous checking.

Since it is not sound policy to reckon without the worker if cooperation is to be expected when the results are applied, the employee should be invited to participate in the study either by direct interview or by filling out the form, which the analyst may then check in a personal interview with the department head and with the worker if it seems advisable because of discrepancies. After all the data have been collected and checked, the analyst should prepare occupational descriptions for each job.

Each job must be rated by giving credit on a comparable basis for all the factors involved. Gertrud Kroeger compiled a schedule that has proved satisfactory for grading the various hospital positions. In it emphasis is laid upon the factors that weigh heaviest in the setting of salary for any position. There are six of these and the total of their relative values in particular jobs will largely determine whether there will be a relatively large or small number of people qualified to fill the position and so whether a low or a high bid must be made to obtain the right person. Three of these particularly variable factors are determined by the work content of the job.

1. Duties: To what extent do they require the ability to exercise individual judgment, initiative, and personal responsibility?
2. Supervision: To what extent does this employee have to supervise and be responsible for the work of other employees?
3. Public contacts: To what extent does this employee have to make successful contacts with other persons?

The larger the demand in each of these cases, the fewer are the candidates available and the higher the salary that must be paid.

The other three factors are achievements considered essential or highly desirable in order to develop the ability to hold the position satisfactorily. Each of these the individual has had to attain personally at some expense to himself and he will, with justice, insist upon consideration of this in the setting of his salary. They are (1) general education, (2) special training, and (3) experience. The evaluation of the relative degree to which these factors are involved requires careful study and the application of individual schedules for each.

The exercise of individual judgment, initiative, and the ability to carry responsibility is the main difference between the ordinary employee and the executive. A review of the duties listed in the analysis will show whether executive attention has to be exercised by the employee or whether his job is more or less routine and under general or constant direction. Seven grades have been determined upon as adequate to differentiate the relative value of this factor, as illustrated in Table 1.

TABLE 1. DUTIES GRADED AS TO AMOUNT OF INDIVIDUAL JUDGMENT REQUIRED

GRADE	DUTIES	EXAMPLE
1	Repetitive	Pot washers
2	Routine	Porters, maids, and orderlies
3	Higher routine	Chief orderlies, clerks, window washers
4	Limited judgment	Nurses, technicians, secretaries
5	Middle-grade judgment	Accountants, pastry chefs, assistant dietitians
6	General judgment	Nursing supervisors and heads of small but important departments
7	Higher judgment	Heads of large departments

It is relatively easier to supervise a large number of workers doing similar work than a small number doing dissimilar tasks. Good organization recognizes this and groups like work together, reserving for the higher executive the coordinating of departments. Inasmuch as supervision and direction may save labor costs materially, the ability to supervise and direct effectively merits encouragement and adequate rewards. Five gradations are adequate to measure the supervisory ability required in any job (Table 2).

TABLE 2. GRADATIONS OF SUPERVISORY ABILITY

GRADE	SUPERVISION	EXAMPLE
0	Responsible only for self	Orderlies
1	Distribution of routine work	Staff nurses
2	Supervision of small department or section of large department	Head nurses
3	Supervision of a larger department or assist in supervision of large department	Nursing supervisor
4	Supervision of a large department	Superintendent of nurses

Poise and the ability to create in people a receptive attitude, to obtain cooperation and information from them, and to promote the interests of the institution are essential in some jobs. This is attained usually only by experience, higher education, or cultural advantages. Candidates with this ability are relatively few and the bid for them must be higher but they are worth the extra compensation in proportion to their opportunities to increase the profits of the institution. The relative importance of this factor may be rated in one of the grades indicated in Table 3.

TABLE 3. DUTIES GRADED AS TO CONTACTS WITH PUBLIC

GRADE	PUBLIC CONTACT	EXAMPLE
0	No public contact	Dishwashers
1	Transmitting of messages	Telephone operators
2	Frequent contact with patients and department heads	Information and room clerks
3	Contacts of a confidential nature	Collection and pay roll clerks

Under general education no credit is given unless high school is completed; education less than that is usually required by law. Generally only after sixteen years of age does education cost the individual anything because he could not be earning anything before that time. In comparing an applicant's qualifications with requirements, credit must always be given for the equivalent of the requirements, i.e., five years of business experience should be interpreted and accepted as at least the equivalent of graduation from high school. Credit should be given as shown in Table 4. The same five steps used for general education may

TABLE 4. CREDITS GIVEN FOR EDUCATION

GRADE	EDUCATION
0	Grade school
1	High school completed
2	One or two years of college completed
3	Graduation from college
4	Graduate or professional training

be used for special training. For example, two points should be given for business college training, three for a nurse's training course, and four for an M.D. or M.A. degree. Thus the case worker with a master's degree in social service rates a "4" under general education and a "4" under special training. While this may seem a duplication of values, it is merited on the basis of the

value of special training for a job as opposed to general training.

Under experience care must be taken to distinguish between quantity and quality. Twenty years as an elevator man would rate "2" while five years as head of a bookkeeping office would rate "4" in the scale used in analyzing this factor (Table 5).

The results obtained from measuring and totaling the points of the six factors must be modified by other less important factors. The opportunity for advancement, number and distribution of hours, disagreeable or pleasant features involved, risks included, and the permanency of employment sometimes require or permit somewhat higher or lower sala-

TABLE 5. CREDIT GIVEN FOR PRACTICAL EXPERIENCE

GRADE	PRACTICAL EXPERIENCE
0	None required
1	A few weeks or a month
2	One or more years
3	More than two years, plus skill up to "expert" level or responsibility for some individual judgment
4	Five years or more of experience; minor executive experience or "expert adviser" status
5	Several years as responsible executive or in consulting position

ries than would be indicated otherwise. Occasionally the demand for maturity or for a man instead of a woman makes it necessary to pay more than the content and other requirements of the job would seem to merit. The analyst should note these special facts as memorandums on his records and adjust his final ratings accordingly.

It will be noted that the work factors provide a possible total ranging from 1 to 14 points. The total points for personal factors range from 0 to 13. It is axiomatic that training and ability should be definitely correlated with responsibilities and duties required. The total of points in each group usually will be within two or, at the most, three points of one another if requirements have been properly matched with job content.

A tabulation providing a summary of the comparative ratings should be made and the jobs listed in order of rank within each department as indicated by total points. Similar jobs in different departments should be carefully compared. It will probably not be possible to rank all the jobs in different departments together solely on the basis of relative point values because, in spite of everything the analyst may do, the range of points in one department may not be proportionate to those used in a department of different size. Some department heads will inevitably rate their workers higher than do others.

One check for the relative rating of jobs is the current salary being paid for each. The analyst must review his final ratings in the light of the current salary schedule and make positive that any discrepancies are fully justified on the basis of job content and requirements. The final schedule must make sense both within each department and between departments.

After the relative rating of jobs has been decided, a fair wage for each must be set. This procedure is one which the interested parties agree is reasonable and possible in view of all the work done and the factors involved, including the financial condition of the hospital. Formerly it was felt that the market rate, or a sum sufficiently above it to give incentive, was the proper salary. Now, however, it is realized that pay should be in relation to the quantity and quality of work performed, the cost and standard of living, sex, age, education, years of service, hazards, possibilities for advancement, profits of the business, and wages for similar work in the community and in industry.

Since the worker knows his own needs best, he should be given heed in setting his

salary. It has been found that when he is consulted he is not exorbitant in his demands if management presents its side of the problem frankly. In Chicago in 1937, for example, the hospital workers asked for a minimum wage of \$75 a month for any male employee. At this time, *Business Week* (Aug. 8, 1937) showed a subsistence figure of \$903 a year as necessary for a family of four. As to the objection that too much haggling would result if the worker were consulted, is it not better to have this haggling before rather than after the schedule has become fixed?

After a minimum salary has been decided upon, the salary schedule may be built up in each department on the basis of the departmental rankings and job ratings. A few landmarks will help to chart the rate of progression; most professional groups (nurses, record librarians, occupational therapists, and anesthetists, for example) have determined informally within their own groups what is a fair salary for their members in view of the standard qualifications they have accepted for themselves. Maximum salaries will depend on resources. The scale should cover a range of salaries, not just the beginning salary for each job.

Since experience has shown that general economic conditions as a rule force considerable variation in salary schedules within three or four years after adoption, a progression covering a three-year period is logical. Although this might be arranged in a four-step program with a raise after each twelve months of service, it might more logically be divided as follows to give the raises when merited by increased usefulness of the employee: a learning period of six months, a salary increase, a year of usefulness followed by a second salary increase, and then eighteen months of increased usefulness before the top of the schedule is reached. It should be understood that salaries for employees who have held their same positions for more than five years will have to be considered individually. Often instead of extra compensation, additional vacation may be given.

The salary schedule should be on the basis of gross salaries. The cash value of all perquisites will be deducted to find cash salary. The value of these perquisites must be weighed carefully to make sure they are computed at fair value and that no injustice occurs because of some employees receiving them and others not.

The personnel officer must use discretion in rating each new employee and in transferring employees to see that they are classified in the correct step in the proper classifications. Raises are not to be automatic but on the basis of merit as certified by the department head. Some fear is held that a job analysis will unveil misfits and make some employees lose their jobs. It should instead mean that at last the misfit may be put into a more appropriate niche.

A job analysis and a fair wage scale will aid in obtaining efficiency.

5. Defects in Civil Service, by *Carl E. McCombs**

THE merit system in public employment, i.e., what is commonly called "civil service," is so generally recognized as a basic factor of efficient conduct of government work that one

* Adapted from *Mod. Hosp.* 50:73-75, Jan. 1938.

hesitates to comment adversely upon it in any particular government relationship. Yet it is quite clear to anyone who has had opportunity to observe its effect, or lack of effect, in government hospitals that civil service, as now established and carried on in the great majority of states and cities, does not produce that efficiency of hospital management or operation that might be expected.

The faults of civil service as now established, in its application to hospital affairs, are the faults of civil service generally, which are apparent to close students of the subject in all government relations. But in hospitals particularly, because of their peculiar needs of freedom from alien influences, prompt and efficient discipline and immediate adjustment of personnel requirements to emergency situations, these defects in the application of civil service are so magnified as to be apparent even to the casual observer.

Let us consider for a moment some of the specific handicaps to efficient hospital operation under civil service as it is generally practiced. First, because a hospital requires teamwork to the "nth" degree in all of its branches, selection of hospital personnel by routine civil service examinations quite often fails to provide employees fully qualified as teamworkers. They may be well qualified professionally and technically, but those personal qualities that make for effective teamwork can rarely be discovered by such tests as civil service applies under the laws of most states and cities.

Then, too, we find that "veterans' preference" under civil service laws frequently compels the acceptance by hospitals of applicants who, but for such preference, would be disqualified for hospital service. To make matters worse, such employees once under the protective civil service mantle have privileges respecting promotion, disciplinary control, and otherwise which create serious problems for the administrator. He cannot always pick the best man for promotion to higher place if there is an eligible veteran who insists upon his right to preferential consideration.

The hospital employee under civil service, like all civil service employees, has been chosen for a particular work on the basis of certain qualifications of experience and training. He comes into the hospital bearing a civil service title which indicates the work he is to do. He is quite within his legal right, therefore, if he refuses to do any work except that for which his civil service title particularly qualifies him. He cannot in fact be assigned without his consent to any other duties which his superior officer may require, regardless of an emergency or other situation which may make such assignment desirable. Nor can a hospital administrator who finds among his civil service personnel one who has a high degree of special ability in a field other than that for which he was appointed transfer the employee to such field even if such transfer means promotion. Civil service necessarily puts hospital employees into narrow occupational pigeonholes from which no escape is ordinarily possible except by another examination.

The great majority of positions under civil service are competitive, i.e., determined by competitive examination, but under civil service laws and regulations as now commonly applied many of the more important hospital positions are noncompetitive. Appointments may be made without competitive examination, solely on the basis of credentials offered.

And frequently, also, important positions are "exempt," that is to say, appointments of deputies, secretaries, special clerks, and confidential officers may be made in many jurisdictions by superior officers without any test of fitness other than that which the appointing officer may deem most expedient to his purposes. Unfortunately, exempt positions are likely to be filled with persons whose qualifications are, to say the least, doubtful. The necessity for certain exemptions of this kind is appreciated, but in many jurisdictions the exempt class is the personnel reservoir which is filled by political patronage. Exempt positions are frequently highly paid because presumably they require special aptitudes. It is largely through this avenue and for this reason that political spoilsmen have succeeded in keeping their controls intact even in departments otherwise rigidly controlled by civil service.

A serious defect of civil service as applied to hospitals is its failure to provide administrative officers with power to discharge promptly incompetent, inefficient, or otherwise unsatisfactory employees. Under civil service, the right of the employee to his job is strongly buttressed in law. The nature of the offenses for which he may be dismissed is set down categorically in the laws or civil service regulations. He may not be fired simply because he does not fit the team. Specific charges must be preferred; the employee must be notified of the charges and permitted advice of counsel.

Unless the court can be specifically shown that the employee did, on such and such a day, do or fail to do a certain thing, it is of little avail for the administrative officer to argue that the employee is hard to get along with, uncooperative, boorish, a trouble maker, or otherwise disagreeable. He gets nowhere on that tack in the face of legal handicaps against dismissal, except for specific charges on which legally competent evidence may be introduced. As many critics of civil service have complained, the front door to public employment is wide open but the back door out of it is barred fast.

If, finally, an undesirable employee is ousted, he may sue for recovery of his position and the records of many such trials show that employees discharged for causes that would bar a man in almost any efficient business enterprise are quite often returned to their civil service positions without loss of standing or even loss of pay. Consider, if you please, how demoralizing it would be, and often is, in a public hospital for the administrator to be forced into toleration of incompetency, inefficiency, indecency, or other unfitness among his civil service personnel. He knows that if he brings formal charges against an employee, he will have to go through an unpleasant trial of these charges with a strong chance of being defeated. Rather than do this he is inclined to compromise with the evil to the detriment of his administrative controls and loss of hospital morale.

The criticisms offered concerning the application of civil service to hospitals also are leveled against civil service by administrative officers in all other departments of government. They will likewise tell you, if they have difficulties with civil service, that their personnel requirements are different from those of other departments; that their problems are peculiar and unparalleled; that they also require teamwork and personal qualities of employees which civil service, as administered, is not equipped to guarantee. But if we look

at hospital personnel requirements a bit more closely, it does certainly appear that when compared with other agencies of government the hospital is an exception in its civil service relationships and does have a unique position with respect to its personal service needs.

Except for a few other highly organized institutional services of which the hospital is the outstanding example, no other government agencies operate on the same twenty-four-hour basis which is so characteristic of hospitals. Other agencies of government, with a few minor exceptions, carry on their work during business hours only. The hospital represents a small community, living and working together as intimately as a family, without nearly as much of the opportunity to obtain relief from responsibility or the relaxation and cultivation of other social or occupational interests as is enjoyed by most government employees. In other words, a hospital employee has comparatively little escape from the hospital environment, even when "off duty." While he is in the hospital, regardless of his particular working hours, he is theoretically at least "on duty" in the same way, or even more so, than the police officer who, though out of uniform, is under obligation to perform police duties in emergencies. The hospital employee's leisure hours usually are spent in the hospital or within its influence.

We have spoken of the need for teamwork in a hospital. This is, of course, desirable in every enterprise; but where, except in hospital or other similar institutional service, is this so essential? The failure, not necessarily of technical competence, but frequently of the spirit of service on the part of the hospital employee even in the most subordinate or menial duty can, and quite often does, obstruct efficient service, damage morale, and endanger patients. The hospital employee, whatever his task, is responsible for the welfare of patients, and his activities must be so motivated. One can imagine in almost any other department of government a technically competent employee who can and does perform his tasks efficiently, even though he has none of this peculiar spirit for public service and feeling of personal responsibility to the ultimate beneficiaries of his work. But the most technically competent hospital worker is a failure, regardless of how well his technical job is done, if he does not look beyond that immediate job to the protection of the health and welfare of patients in whose service his work may be only a relatively minor factor.

Hospital employees serve the most intimate personal needs of patients. Whether they are employed as cleaners, dishwashers, cooks, attendants, engineers, plumbers, electricians, nurses, or doctors, all are essential cogs in the mechanism whose product is better health. Nowhere else in government is there this direct, personal, intimate relation with the individual in need of government supervision and care, and nowhere else is the end-result of more vital concern to the public.

There is this also to be said: Because the relationship of the employee and patient is unusually intimate and personal, and because the patient is in a situation disturbing to him mentally and physically, the employee must be understanding and responsive to the patient's condition and point of view. Any disagreeable attitude or manner on the part of the employee that further disturbs or annoys the patient is not conducive to the treatment regimen. A sour, crabbed, surly, morose, intolerant, highly emotional or otherwise unpleas-

ant hospital employee, no matter how technically efficient he may be, is a bad influence not only in his relation to patients but in his relation to other employees. Hospitals need employees who are psychologically and temperamentally fitted to the hospital purpose, and this we feel calls for examinations under civil service that will measure more completely the individual's responsiveness, sympathy, and understanding in all activities consistent with the hospital objective.

We have considered only a few of the more significant defects of civil service as now observed in government hospitals and their bearing on the hospital objective. One might suppose that I am opposed to civil service. On the contrary, I believe in it strongly as the only effective safeguard against the spoilsman in all government enterprises. My criticism is not that the aims or ideals of civil service are inconsistent with hospital purposes, but rather that the system of civil service administration which has been set up throughout the country is not suited to those purposes. As John Stuart Mill has said of the British Civil Service:

Their machinery (of public departments) is excellent, when the proper tests are applied for the qualification of officers, the proper rules for their promotion; when the business is conveniently distributed among those who are to transact it, a convenient and methodical order established for its transaction, a correct and intelligible record kept of it after being transacted; when each individual knows for what he is responsible, and is known to others as responsible for it; when the best contrived checks are provided against negligence, favoritism or jobbery in any of the acts of the department.

But political checks will no more act of themselves than a bridle will direct a horse without a rider. If the checking functionaries are as corrupt or as negligent as those whom they ought to check, and if the public, the mainspring of the whole checking machine, is too ignorant, too passive or too careless and inattentive to do its part, little benefit will be derived from the best administrative apparatus . . .

A good apparatus is always preferable to a bad. It enables such insufficient moving or checking power as exists to act at its greatest advantage; and without it no amount of moving or checking power would be sufficient. The ideally perfect constitution of a public office is that in which the interest of a functionary is entirely coincident with his duty. No mere system will make it so, but still less can it be made so without a system, aptly devised for the purpose.

In this phrase, "interest . . . entirely coincident with his duty," lies the essence of civil service and particularly hospital personnel management.

The merit system or civil service system is a positively essential administrative mechanism if we are to prevent the restoration or recrudescence of the spoils system in American government. As such administrative mechanism it must necessarily be applied to all phases of governmental activity. It must be applied therefore to government hospitals.

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CHAPTER XXVII. PUBLIC RELATIONS

1. On Humanizing the Hospital, *by S. S. Goldwater, M.D.**

IN the July, 1123, issue of *The Ancient Hospital*, one might have read the interesting announcement that St. Bartholomew's Hospital, London, was seeking a "master" who, in conformity with the rules of the hospital, was required to be "gentle, good-tempered, kind, patient to the sick and ailing, and prepared to gratify their needs with affectionate sympathy." This brief extract from the rules of the hospital makes it evident that the motive that prompted Rahere to build St. Bartholomew's was humanitarian, not scientific; the purpose of the hospital was "to give aid to the needy, orphans, the outcasts and poor of the district, as well as to afford relief to every kind of sick person and homeless wanderer." Let us hope that St. Bartholomew's found the kind and gentle master it sought; that the master was able to surround himself with servants as compassionate as himself; and that he experienced no difficulty in obeying his instructions "to withhold from patients all evil rumors" and "in no wise to disturb them when they are resting." Nowadays hospitals are apt to look for efficiency rather than gentleness in their "masters" or superintendents; and recently a strong protest against waking patients at five o'clock in the morning, published in *The London Times*, indicated that some, at least, of our English contemporaries have forgotten the admonition which reads "in no wise to disturb patients when they are resting."

According to Booth Tarkington, one of the difficulties of the professional author who seeks to produce a fresh and palpitating human document is "how to get the ink out of it." It might be said that the problem of the hospital administrator who wishes to humanize his hospital is how to get the institution out of it; and in all humility, as one who has tried and never more than partially succeeded, I confess that the task is a little beyond me. But—never say die! Bertrand Russell, who regards the ways of nature as cruel and abhorrent, and who is baffled and disheartened by the very problem of existence itself, declares that "it is only on the firm foundation of unyielding despair that the habitation of the soul may be safely built." Though we hospital men acknowledge our despair, let us resolve never to yield, and perhaps, notwithstanding our initial failures, we may yet succeed in getting rid of our "institutions" in order the better to preserve our hospitals.

Is it possible that one of the reasons why hospitals are not consistently kind is that human beings do not regard each other as worthy of genuine consideration? One's hopes of a hospital world fit to live in are not raised by a writer like James Branch Cabell, who points out that while children have a temporary lien on tenderness, grown-ups do not usually respect each other. "Why should they?" adds this shameless cynic. If we are wanting in solicitude for our patients, grown-ups and children alike, we shall be repaid as hospitals

* Adapted from *Mod. Hosp.* 22:539-545, June 1924.

have been repaid for generations. Confidence is the reward of kindness, distrust, of the lack of it. It would be unkind to name the great municipal hospital which is surrounded by a population among whom there survives the myth of the black bottle, by repute a convenient instrument for disposing deftly of patients who prove too troublesome. With a legend of that sort still firmly lodged in the minds of a people who enjoy the advantages of a Western education, is it surprising that in far-off China, where the steam railroad, mysteriously propelled by an unseen power, and the missionary hospital, prompted by motives unimaginable to the simpler natives, made their astonishing appearance at the same time, the ignorant Chinese peasant, putting the two together, reached the startling conclusion that the motive power of the railroad consisted of human spirits, cunningly extracted from the bodies of Chinese hospital patients on their death-beds? A certain evil repute still clings to missionary hospitals in some parts of China, despite the shining humanitarianism of the missionaries.

It is a pity that hospitals and doctors are not mentally associated with health rather than with disease. The adage, "an apple a day keeps the doctor away," seems to suggest that the doctor brings the disease, not the cure. A happier association of ideas may result from the growth of preventive medicine, and hospitals will miss their opportunity if they fail to get promptly into this movement. The "big idea" is to get the doctor and the hospital established in the popular mind in association with successful efforts for the preservation of health. Let the doctor be primarily a friend who once a year makes a physical and mental appraisal of his patient; who advises him how to keep health in his body, money in his pocket, and happiness in his soul. In pre-Volstead days one might have legitimately proposed as a substitute for the jingle of the apple, the jingle of beer: "A doctor a year keeps the family in beer."

If we recognize the fact that in the public mind the hospital is a bitter pill in need of a sugar coating, we may hope eventually to win public confidence and approval. W. E. Henley spoke for a myriad of patients when he described his dismal first impression of an English hospital:

My confidence all gone,
The gray-haired soldier-porter waves me on,
And on I crawl and still my spirits fail—
These corridors and stairs of stone and iron,
Cold, naked, clean—half work-house and half jail.

The hospital social worker ("almoner" in England) is a happy substitute for the soldier-porter, but even the hospital social worker, the patient's friend-designate, is in danger of acquiring a certain rigidity of mind and habit, to avoid which the "hospital hostess" has recently appeared—the latest hope of the hospital humanizer. The hospital hostess who understands her job will never put up with "corridors and stairs of stone and iron, cold, naked, clean"; her first demand is for a pleasant office in which to receive her guests, with a scheme of decoration and furnishing that suggests the home rather than the institution;

the hospital which is thus infected can hardly remain immune against soft feminine influences in any of its departments.

Physical and mental impressions as well as personal contacts may be depressing to a patient, a truth which it is fatal to forget in the planning, arrangement, or equipment of a hospital. Some naturally gentle superintendent must have been sound asleep when an engineer, in a prosperous city in Ireland, was permitted to erect a hospital in which mechanically ventilated wards were arranged side by side like so many crowded packing boxes in a storehouse, thus depriving patients in bed of any view of the wonderful world outside. A result almost as unfortunate was achieved in more recent times by a well-intentioned hospital superintendent who, thinking only of the convenience and efficiency of the nurses (an excellent idea in itself) so arranged the beds of 600 patients that not one could see sky or country. To be compelled to stare for weeks at a blank wall is a severe penalty for permitting oneself to lapse from health. The superintendent of a Scotch hospital who used wood instead of marble to floor his dispensary waiting room because many patients came barefooted was, to my mind, the abler—he certainly was the more considerate—hospital builder.

A natural incongruity between personal service and large-scale organization is at the bottom of much of our trouble. How can effective, up-to-date medical work be accomplished without organization and system, and how can we arrange for the prompt suspension of a rule whose rigid application threatens to wound ever so slightly the feelings of a patient or of his friend? The ambition of youthful superintendents, eager to demonstrate their executive ability, tends easily in the direction of the drafting of rules; but humane administration calls for the breaking as well as the making of rules.

But the breaking of rules should be prompted by motives of service, not of servility. A certain superintendent prided himself on his tact, in testimony whereof he was wont to explain that his subordinates were instructed never to say "No" to anybody without first ascertaining the social quality of the petitioner. While I do not question the honesty of that superintendent, it seems to me that he was trying to build up a successful hospital on a foundation of favoritism rather than fair play. If there is to be any favoritism in a hospital, let it be shown to the friendless patient—else this ceases to be God's own hospital country, and becomes the country of the rich and influential.

Systematic organization tends toward automatism and the machine-like methods of bureaucracy; yet a large hospital cannot wholly dispense with system. It is easy to deal pleasantly and intimately with a single person, but hard to be courteous toward an impatient mob. The hospital information clerk who is calm and collected in the morning, who hears questions patiently and answers them discreetly and quietly, will often be found speaking in a shrill, irritating staccato after experiencing the strain of a multitude of demands. "Of course it is necessary to control the crowd," said a hospital visitor on ward visiting day, as he stepped out of the waiting line; "but I'm different and need no restraint—pray let me pass!" Instantly the crowd broke ranks.

A single patient may be consulted about his preference in the matter of food, but how

can the personal preferences of several hundred be respected without multiplying cooks and kitchens, with consequences disastrous to the hospital treasury? But the hospitals are not standing still; ten years ago, a hospital of 500 beds employed a single dietitian who, assisted by one pupil nurse, supplied all of the special diets the ward patients received; ten dietitians are employed in the preparation of special diets in that hospital today, and their increase denotes humanitarian as well as scientific progress.

Many difficulties vanish when individual physicians and nurses are kind and considerate. A distinguished visiting physician made the brilliant suggestion that on ward rounds a physician should sit down for at least a minute beside the bed of each patient. What assurance has a ward patient that he has really been noticed by the physician who marches by, head in air? How successfully would a physician be who in private practice breezed into a sick room, put a perfunctory question or two while standing, and then walked out again? How much confidence would the patients of that physician have in him? Heaven may forgive the physician who first frightens the life out of his patient, and then comes back with a faint note of intended encouragement; from us, that physician will receive no mercy. And the lay public is surely finding him out, for only recently "F.P.A." ridiculed mercilessly the physician who says, "You are in a frightful condition, but I can make you well!"

Various expedients have been suggested to counteract the dehumanizing influence of mass treatment in large hospitals, which so profoundly affected Arnold Bennett that he puts into the mouth of one of his characters in *Riceyman Steps* the shocking statement that he would die rather than enter an institution where individuality is so outraged by inelastic rules and lack of privacy. It has been wisely suggested that hospitals should not be permitted to grow too large; but will it help the sick if hospitals are kept so small that adequate technical treatment becomes economically impossible, and the development of the highest technical skill improbable? One well-equipped, well-managed general hospital, not too large, is better for a community of 100,000 people than three or four pitiful make-shifts. It was Mark Twain who advised, "Put all your eggs in one basket and watch that basket."

"Abandon large wards; give every patient a separate room," is a suggestion that comes trippingly from the tongue of those who do not understand that to put a patient in a single room and leave him to his own devices may be alien to true kindness. "I like our new single room wards," said a hospital nurse, "that is to say, I would like them if only I had some means of knowing what is happening to my patients!" Privacy with adequate attention is one thing, separation with neglect is another. Besides, the sick are often terrified by loneliness; it is as true as ever it was that misery loves company.

Among many wonderful doctors and nurses are some who have the defects of their professional qualities. Concentration on technical problems is not only not a criminal offense, it is indispensable to scientific progress. Fearing that too much attention might be paid to scientific problems, a kind-hearted person caused to be written over the threshold of a German hospital the motto, "Forget the disease and remember the patient." This is an

excellent motto for the hospital, a dangerous one for the doctor, to live by. It is the business of a doctor to keep his mind on disease, to observe symptoms closely—he cannot otherwise successfully fight his patient's battle; hence, a more satisfactory motto for the hospital physician would be, "Study the disease, but do not forget the patient." Nevertheless, it is as true today as it was in 1636, when St. Vincent de Paul thought it necessary to organize his lay visitors to the hospital wards of Paris, that certain needs of hospital patients fail to receive the attention of the professional staff; hence the hospital social worker.

In the lexicon of humanitarianism, there is no such term as "undesirable patient." The hospital which studiously informed the public that "no patient was ever turned away," but which slyly concealed the fact that every year a thousand "undesirables" were dumped on a nearby municipal hospital within a few hours after admission, may have deceived its public; it did not, in the quaint Oriental sense, "acquire merit." Father Damien regarded no case of leprosy as undesirable; nor should we. A patient may be appropriate or inappropriate to a given hospital service; in either case the hospital has an obligation—in the first case to care for the patient, in the second to obtain care for him; and in every case the true nature of the service rendered should be candidly told.

In a hundred ways modern hospitals are improving in personal attention and service. Crile has shown that the danger of surgical shock can be lessened by controlling the conditions under which anesthetics are administered. The surgeon's viewpoint and that of the patient cannot be the same, but the closer the understanding between surgeon and patient, the better;

His mind at ease, the surgeon plies the knife;
I think of home, my children, and my wife.

The semi-starvation of the dispensary patient who is forced to stand or sit in line for hours before being examined and treated is a serious fault which may be ameliorated by providing a dispensary lunch counter. The heavily laden garbage pail in the average ward kitchen tells a story in part of meals not properly planned, but still more, of patients too weak or dejected to help themselves to the food that is put before them. I suspect that in certain hospitals in Japan, where the hospital administration provides no food for the patients but where relatives are permitted to bring raw food from home and to prepare it in the hospital kitchen, patients who do not require scientific regulation of their diets are at least as well fed as are many of the patients in our American wards.

The body of the acutely sick patient may be starved in consequence of inattention; so may be the mind of the convalescent. The convalescent mind is best provided for in hospitals where libraries are kept in circulation by social workers or volunteers. No librarian has a more delicate task than the hospital librarian who undertakes to provide the sick with suitable literature. Here is an art that requires further development under the expert guidance of competent psychologists. "In a long sickness," said a recent writer, "one does not want to be cheered, one wants to be transported. For a lot of pain there is nothing like a detective story; but when your temperature goes above 101° it is just as well to skip the murders."

One is often tempted to suggest the abrogation of all rules that restrict visits to the sick. I found a certain fascination in the wards of Japanese hospitals where, at night, friends of both sexes were permitted to bring mats and sleep on the floor. I am not sure, however, that such a practice is suited to America. In our country, the presence of visitors in a ward may interfere with proper examination or treatment, but the visitor who for this reason is denied access to the ward is entitled to an apologetic explanation. When the enforcement of any rule leads to many protests, it is well not to abandon it precipitately, but to reconsider it impartially.

The strict exclusion of parents from the children's ward of a certain hospital has sometimes been denounced as "cruel and unusual punishment." The rule was adopted, of course, in the belief that the introduction of contagious disease might thus to some extent be controlled. As a matter of experiment, the hospital once suspended this rule; but the rule was restored when it was found that after each visiting hour the average temperature of the children was up about one degree; besides which, the children were inconsolable for hours.

The convalescent patient, whether big or little, needs occupation. The yearnings of convalescent children for occupation and companionship may be supplied in part by a kindly kindergartner. Games for small children take the place of a circulating library for grown folks. The latter do not much fancy being left to their own thoughts. As H. M. Tomlinson recently put it, "People dread being left alone with their thoughts for the reason that they cannot face them—perhaps because they soon grow weary of staring at nothing." It is particularly hard for one who is sick to be compelled to "stare at dark doubts he would rather ignore."

The hospital patient is subject to many small deprivations at a time when to be deprived of health would seem to be hardship enough. It was native sympathy which allowed the sick worker in English hospitals his accustomed daily beer. "No smoking" is the rule of safety in hospitals, and there is justification for its strict enforcement especially in nonfire-proof hospital buildings; but in military hospitals, during the war, there was nothing that the men seemed to enjoy so much as their tobacco.

The modern hospital is conscious of its obligations and eager to finish its job. It is a healthy sign that physicians and surgeons everywhere are demanding the establishment of follow-up systems. Hospitals which invite discharged patients to comment on their hospital experience learn much that is of advantage and that might not otherwise be known. The patient who has been discharged from the hospital derives a good deal of satisfaction, and eventually, in many instances, actual physical benefit, from the cordial personal letter which informs him of the hospital's continued interest in his welfare.

We have, I fear, all heard patients beg for water when no nurse was by to give it to them. And there are other forms of attention which patients in bed urgently require and which they cannot always get as promptly as might be desired. The intern who puts his request for the personal assistance of a nurse above the exigent claim of a suffering patient forces one to the reluctant conclusion that he is an incredible, unmitigated cad; and one is

strongly tempted to speak in similar terms of the alleged nurse, who, forgetting the noble traditions of the profession with which she claims fellowship, seems by her manner to say to her helpless and troublesome patient (she does not often say it in so many words), "You have made your bed; now lie in it!"

How some patients would love to have the privilege of wearing their own clothes in the ward! Perhaps they would be less insistent if the practical and sanitary aspects of the case were clearly and patiently explained to them. It required twenty-seven years of effort to persuade the Chinese to give up their own clothes in a missionary hospital in Manchuria, but the patients were much better cared for when finally they accepted the cleaner and more appropriate garments which the hospital provided for them.

The visits of spiritual advisers afford genuine solace to hospital patients who are not yet *in extremis*, yet patients who are not dangerously sick may hesitate, unless specifically encouraged, to ask for such visits. A little girl in a Jewish hospital gave a humorous turn to the matter when on being asked whether she knew who the dignified gentleman was that had just passed through the ward, exclaimed: "Oh, yes! He is the rabbi." "And what does the rabbi come here for?" "To prey on us," was her reply.

No effort should be spared to get word to the friends of a patient when it is seen that the fight for his life is hopeless. It is not enough to notify the relatives of such a patient that they may visit the hospital at will and remain as long as they like; their comfort must be looked after while they are there. I know of one hospital that has made many friends for itself by declining to accept fees for furnishing food or shelter to the friends of dangerously sick patients.

While it is the right of a patient in a "closed" hospital to see his family physician as often as he may desire, a right which is equally his but upon which he is not likely to be so insistent is the precious right of protection from all quacks and quackery. Happily, a recent court decision established clearly the right of a public hospital to exclude from practice in its wards persons deficient in medical training and skill; but for this, hospitals might have been forced to become accessories to malpractice.

The principle is well established in law that no hospital patient may be permitted to suffer from neglect; I have never been able to square this reasonable rule of law with the acknowledgment of hospitals that they are short of nurses, for a shortage of nurses is *prima facie* evidence of the neglect of patients, which is inadmissible on any plea. The number of special nurses that a hospital employs to help individual patients through critical illnesses is a fair measure of its sensitiveness to the appeals of humanity. How many hospitals, one wonders, have a satisfactory record of such employment?

The sick have a right to be protected from nuisances which tend to arise in hospitals. Patients occasionally become delirious, and may alarm their neighbors. For such patients, as well as for those whose sands are running low and whose last hours should be consoled by the presence of those near and dear to them, separation rooms should always be at hand. By the use of screens, the temporary privacy which is the right of every human being in a civilized society may be provided even for patients in large wards. It is cruel to ask a con-

valescent patient to partake of food in a ward containing persons who are seriously sick; hence every ward should have its day room or dining room. Examining and treatment rooms are needed, to which those may be taken who require prolonged, painful, or depressing examination or treatment.

In the location, designing, and construction of the hospital the production and dissemination of all manner of noises should be considered and combated. The silent elbow of the practised cleaning woman is preferable in a hospital to a noisy vacuum cleaning system. Signal and telephone systems should be installed in such a manner as to disturb patients as little as possible. Elevators, kitchens, and sink rooms should be placed at a distance from sick rooms and wards.

There should be a note of cheer not only about the reception rooms of the hospital, but about the wards, and indeed about all parts of the hospital. Color may be used in many ways to enliven hospital interiors, even though stained glass windows as beautiful as those of Chartres cathedral are beyond reach. For children's wards and day rooms, stories told in pictures are appropriate:

Dear, old, delightful legendary themes
Pictured in colors bright as children's dreams.

It is a far cry from the acceptance of the jail-like hospital of Henley's verse to the systematic employment of interior decorators by modern hospitals; but I think that that architect went too far who, in endeavoring to lend a cheerful aspect to a nurses' home located in a rather dingy quarter of a certain city, enclosed the electric bulb over the front door in a bright red globe, thus causing misunderstanding among the neighbors, inviting hasty inquiries from the police, and spreading consternation among the nurses.

The susceptibilities even of medical visitors were considered by a hospital architect who provided for a certain operating room a floor of dark red tile in the center, lighter red beyond, pink beyond that, with a white border, and who explained that in this manner he hoped to conceal as much as possible the presence of blood on the floor. Of greater importance from the standpoint of the patient is the use of floor material which is not too cold, or, where the use of cold material is regarded as necessary for sanitary reasons, the provision of slippers for the use of patients who are able to get out of bed.

Gratitude awaits the genius who will show hospitals how to keep the question of money in the background. It has been the sad experience of hospitals which do not, figuratively speaking, hold a pistol at the heads of patients on admission, that a part of their legitimate income is forfeited. From a humane standpoint I like the financial traditions of the British voluntary system; for generations the British voluntary hospitals prided themselves upon the fact that no money was demanded or accepted from any patient. Of late, however, even the British voluntary hospitals are shifting their ground, for two reasons; first, they need the money, and second, they are coming to recognize the fact that the prosperous as well as the poor are entitled to hospital care. The liberal practice of American hospitals, providing for payment on a sliding scale according to means, is, it seems to me, entirely

consistent with sound social policy and with kindly consideration for all individuals and classes.

Most patients who are able to pay their way are glad to do so, but no one likes to be forced to pay. A polite request for payment is better than an uncompromising demand. "Politeness is a dangerous thing for the ordinary man to fool with," said a writer; for "if you aren't careful how you use it, somebody is certainly going to think you are trying to get money out of him." In dealing with private patients, hospitals must unfortunately run this risk. There is a fine acceptance of mutual responsibility in a certain hospital in the South where no payment is exacted either on admission or during treatment, but where on leaving patients are permitted to deposit what they please in a contribution box which is placed conveniently near the exit. A large out-patient department in Canada prospers under a like arrangement.

By definition, the professional man is supposed to use his skill for the benefit of others and not for personal ends, and one can picture physicians, under a happier social system, practising their profession without a thought of pecuniary reward. Obviously, the physician who works solely for pay degrades his profession. In England physicians are beginning to demand payment for professional services to ward patients, especially in instances in which the hospital derives income from sickness insurance funds. It is a pity that the physician must think about money matters at all for, like the artist, he is at his best when he is single-minded. An acute critic, Sarah N. Cleghorn, recently said: "It may be dangerous to the single-mindedness of artists to associate earning capacity with the passion for self-expression. Would it not be dangerous to children's play to pay for it, or to pay lovers for courting?"

In hospitals, the question of spending money, like that of collecting it, has humane aspects. Blood transfusions come high, but often it is a case of transfusion or a speedy end to life. The imperative needs of patients should be met regardless of expense; moreover, those who work in hospitals and who have no other means of livelihood should receive proper payment for their services.

In a letter addressed to a "modernist" bishop of the third century, Origen, the outstanding Biblical scholar of his time, quotes the law: "Thou shalt not remove the ancient landmarks which those before thee have set." Yet we today know that the possibility of progress hinges on the removal of landmarks, and that the landmarks that chiefly obstruct human advance are erroneous ideas, firmly rooted in common thought. It is my belief that many of the minor abuses that exist in public hospitals are due to our inheritance of the "charity hospital" tradition—to the notion that between patients in the public or free wards of a hospital and paupers there is no real distinction, and to the tacit assumption that paupers are a bad lot generally, useless to themselves, a burden to society, mentally deficient, probably vicious, and without any saving grace. If paupers are like that, and if free patients are paupers, why bother? Well, a great many hospital workers *are* bothering, for in their eyes the hospital patient is not a worthless derelict but a brother in distress. There is a world of encouragement in the steadily rising standards of hospital service; but most

encouraging of all are certain little things that show consideration for the feeling of patients. The hospital that, in order to avoid stigmatizing patients as "tuberculous" and to strengthen the confidence of patients in itself and in themselves, thoughtfully changes the name of its tuberculosis clinic to "department for diseases of the chest," has removed an old landmark, has parted company for all time with the condescending spirit of the charity hospital, offspring of the impersonal and cold-blooded almshouse of old, and has become a humane institution, which eventually will find the way to the glorious accomplishment of its noble aims. And its glory will not be to itself alone, for in the words of George Herbert:

A little glory mixed with humbleness
Will cure both fever and lethargickness.

2. An Administrator and His Public, by *A. C. Bachmeyer, M.D.**

THAT the hospital is an essential institution and a vital factor in social and economic life is generally recognized. Designed to serve the needs of large numbers of the public, the service it renders is based upon the needs and demands of those who are potential patients. The institution is also in the largest measure dependent upon the support of the public and must be responsive to public demand and opinion.

Among the many lessons which these years of economic stress have taught, a major one has been the fact that no hospital can exist entirely unto itself. Though it be the only hospital and especially if it be one of a number in the community, it cannot disregard the public or its fellow institutions. The time has passed when an institution can develop a program of service, of construction or other expansion without careful consideration of the needs of the public it serves and of the other institutions and agencies serving similar or related purposes.

Rather than the development of service or other programs based solely on the ambitions and desires of individuals interested in a single institution it is essential that the needs of the community and the services of all other hospital, health, and welfare agencies be taken into consideration. Because of the functions it performs, because of its contacts with so many phases of the community's life, the hospital should have a part in all plans designed for the improvement of health and social conditions. The many difficulties, primarily of an economic nature, that confront hospitals at the present time emphasize the necessity for community planning and the need for promoting favorable relations between the institution and the public.

The responsibility for establishing proper relations with the public and with other social and health agencies naturally devolves upon the administrator as the executive head of the hospital. Large numbers of the public are constantly passing through the hospital, who, so far at least as the administrator is concerned, may be spoken of as the unorganized public. This group is represented by patients, their relatives, friends, and associates, by the

* Adapted from *Mod. Hosp.* 45:37-39, Nov. 1935.

employees of tradesmen, and the large number of visitors who constantly are entering the hospital. Important public relations are established through these individuals, many of whom belong to organized groups in the community.

Incidents which they witness, conversations in which they engage or which they overhear as well as their own experiences often form the subject of their discussions with their associates. These recitations often react to the benefit or hurt of the institution. While seeking channels through which to bring the hospital to the attention of the public and through which to mold a favorable public opinion, hospital executives often overlook this group, one of the potential agencies for such a purpose. Efficient, sympathetic service to the patient; kindness, patience, and courtesy on the part of every member of the institution's personnel; good judgment and an understanding of human relationships in meeting and interviewing this unorganized group of the community will go far in building the hospital's reputation. The administrator has a definite obligation and responsibility in this connection. In this sense his public relations begin within the doors of the institution. The results of his efforts may be intangible but they are nevertheless real.

As has been indicated, the hospital cannot stand alone but must integrate its activities with those of other hospitals and with health and welfare agencies in order to meet properly the needs of the community. The administrator should therefore be informed concerning the organized health and social agencies of his community. He should know personally the executives of all such agencies, attend their important public meetings, and confer with them as often as possible. Experience has shown that when an individual and especially one who holds a responsible position evidences an interest in the work of a social or health agency his participation in the affairs of such an agency is welcomed. If such an individual indicates a willingness to cooperate, is genuine in his interest, does not seek to exaggerate his own importance, appear overly ambitious, or endeavor to force his own views, his counsel and assistance will be eagerly sought.

The administrator should take advantage of every opportunity to work with both public and private health and welfare agencies in his community, endeavor to understand their viewpoint and their purpose, be cooperative and willing to join in discussions and in the formulation of plans to meet the community's needs. Where hospital councils and councils of social agencies exist, it is his responsibility to participate in their activities. Opportunities for leadership will be afforded which the able, progressive executive will be prompt to seize to the benefit of his institution.

The divisions of the public to which reference has been made bear direct relation to the hospital and some contact with them cannot be avoided. The administrator's attitude toward them is of primary importance.

Another public agency of equal importance is the public press. The administrator frequently encounters difficulty in establishing satisfactory relations with press representatives because of inhibitions and fears largely the result of a lack of understanding of the restrictions placed upon publicity by the ethics of the medical profession. The hospital executive should be thoroughly conversant with the code of medical ethics in this respect.

The public press is a powerful and valuable agency whose good offices are in most instances readily available to the hospital. Hospital executives usually recognize the educational value of the press but, through lack of understanding, fear to use it or for one reason or another shy away from conversations with editors or press representatives.

Newspaper editors, if not their representatives, the reporters, are cognizant of the ethics of the medical profession and except in isolated instances will readily observe the rules. Frank discussions with editors and reporters will usually result in clear understandings and proper working arrangements. Reporters are employed to obtain news items and their insistence at times is entirely in the line of their duty. The hospital executive must protect the interests of both patients and institution, but experience has shown that press representatives are as capable of exercising discretion and good judgment as are any other human beings and a frank recitation of all facts in a given case is usually the better policy. When possessed of all of the facts in a given case the news writer can do justice to all concerned, whereas evasion or concealment of fact may react to the hurt of the institution. The establishment of favorable relations with the press is not a difficult matter and the administrator will find such relations of great value in promoting the interests of his institution. His dealings with the press must be fair and above board and must take into consideration the interests of other hospitals and allied agencies in the community.

There are numerous other organizations and groups that take an active interest in hospital and health activities though their primary purposes may be of an entirely different nature. Among such may be mentioned civic groups such as boards of trade or chambers of commerce, men's and women's luncheon clubs, parent-teacher associations, and neighborhood associations; church organizations; fraternal groups; labor organizations; and social groups such as the junior league and similarly organized bodies of young women and young men. Many of these have given great aid to hospitals on repeated occasions and some take a continuing interest and are constantly active in matters having a distinct relation to hospital activities. The wide-awake and able administrator will foster favorable relations with as many of these associations as possible. Through them as well as through social agencies and educational institutions, opportunities to give addresses and otherwise to tell of the functions and services of the institution will be afforded. By taking full advantage of these opportunities the executive may inform the public concerning hospital and health affairs.

An enlightened and understanding public is the institution's best ally in times of stress and such a public will be quick to protect the hospital's interests. Personal membership in organizations of this type will be helpful, but it is not essential that the hospital administrator be a "chronic joiner" and a member of every organization that extends an invitation to him. He should join such as have a special appeal to him, in whose program and purposes he has peculiar personal interest, but not with a deliberate intent to promote his own interests. It is, of course, important that he avoid any alliances that would be to the detriment of his institution's or his own interests.

There are few institutions that do not have some type of auxiliary organization inter-

ested in their work. With proper planning such organizations have great value for the hospital. The competent administrator will foster the interests of such associations and diligently plan for their activities so that his institution will profit to the greatest extent.

The large number of individuals with whom the executive is brought into personal contact will afford many opportunities for friendships and social relations through which recreation and relaxation are provided. The executive should be circumspect in choosing his associates and friends. He should be careful not to become involved in entangling alliances that in any way may interfere with the impartial performance of his duties. Social activity, though it should never be sought for ulterior motives, will often prove helpful in the conduct of business affairs.

3. An Organized Community Plan of Public Education*

A PROGRAM of public education must be carefully planned and thoroughly organized to meet the individual needs of each community. There are certain ways and means, however, that are generally applicable to all communities in carrying out a program of educating the public.

First of all, the organization of a community hospital council in communities where more than one hospital exists is most desirable. The organization of such a council provides an opportunity to carry on a more concerted program of public education. There is no needless duplication of effort, and through cooperation and elimination of competition a better organized and directed plan is possible. Inasmuch as a program of public education concerning hospitals is directed not at the publicizing of one institution but at making known the services of all good institutions, a hospital council constitutes the most satisfactory and feasible means of accomplishing this purpose in any community.

It is not necessary that a hospital council operate in secrecy. To let the public know that such a community council does exist is a wise piece of strategy. We want the public to know that our hospitals are not working at cross-purposes, that they are not engaged in competitive practices. We want the public to know that hospitals are cooperating so that they can better achieve their primary purpose, the adequate care of the sick and injured of the community.

Wherever possible, a public relations counsel should be engaged to assist in working out the plan and carrying it through. A man or woman with a thorough knowledge of hospital service and a mind trained in the psychology of publicity methods is a valuable asset in a program of public education.

A hospital council may not be as easily organized in sparsely settled regions where only one hospital exists, or in isolated communities. But where the distance is not too great and the problems of the communities not too diverse, two or more hospitals could well group together in forming a council for carrying on a plan of public education. It is the unity of

* Adapted from Report of the Committee on Public Education of the American Hospital Association, *Tr. Am. Hosp. A.* 36:135-144, 1934.

effort and consolidation of ideas together with the important element of cooperation that will achieve successful results.

The community hospital council will find that its most commonly used means of conducting the program will consist of bulletins, pamphlets, and annual reports, newspaper stories, radio talks, club, civic, and school talks, church sermons, hospital tours. To be effective each of these methods must be wisely integrated into a carefully planned schedule. The program should include visual means such as exhibits, lantern slides, and motion pictures. Hospital Sunday and National Hospital Day provide excellent opportunity for the utilization of all means of public education, and if carefully planned can result in the development of much good will on the part of the public toward its hospitals.

Hospitals must seek to play a more prominent role in community activities. The efficient functioning of a council will be better able to place the hospitals in contact with community projects so that the important service of these institutions in the life of their communities may be properly emphasized. Through the community hospital council, also, greater success can be achieved in enrolling the hospitals in the programs of national, state, and sectional meetings. Efforts should be made toward conducting community health and hospital meetings annually, if not oftener. Such meetings, if properly organized and announced in advance, are always well attended, and serve as an admirable means of acquainting the public with health and welfare problems and more specifically with the role of the hospital in the protection of human life. A careful, well-organized plan of public education should result in the following specific benefits:

1. Develop public understanding and appreciation of hospital service.
2. Foster an attitude of genuine good will on the part of the public toward the hospital.
3. Stimulate a more accurate analysis of community needs and institutional resources so that the hospital may assume its rightful place in the life of the community.
4. Promote a greater desire on the part of the personnel to understand the work of the hospital and to effect a closer contact between the personnel and the public.
5. Cooperate with other health agencies in the community so as to meet more adequately the health and welfare needs of the community.
6. Clarify to the public and to governmental bodies the status of voluntary hospitals so that the many economic problems now being controversially discussed may be solved in the most desirable manner.
7. Effect a thorough understanding as to the legitimate reasons for hospital construction, make known the disadvantages of overhospitalization, and stimulate the greater use of existing hospital facilities.
8. Remove the influence of politics from governmentally owned and controlled institutions.
9. Explain the reasons for hospital standards, what they are, how they protect human life and promote safer and more adequate care of the sick and injured.
10. Encourage the public to look to national organizations cooperating with hospitals for information and guidance in problems of health and welfare.

11. Clarify to the public the position of the hospital as the principal source of skilled and continuous nursing so that it may be generally understood that this service is available to the community.
12. Improve the health and welfare conditions of the community by encouraging the use of hospital facilities in the periodic health examination.
13. Promote closer cooperation and integration of all hospitals in each community and entirely eliminate any spirit of competition.
14. Encourage the use of the hospital by people previously fearful of institutional care.
15. Stimulate voluntary contributions and public and private endowments.

It is the belief of the Committee on Public Education of the American Hospital Association that the following recommendations if adopted and carried out with care and deliberation will be conducive to a successful program in educating the public. It is, therefore, recommended:

1. That each community direct more careful attention to a properly planned program of public education so far as its respective hospitals are concerned.
2. That whenever possible such a plan of public education be sponsored by a hospital council.
3. That in any extensive program of public education the employment of a hospital public relations counsel be considered.
4. That no hospital be permitted to participate in such a program of public education which is not fully worthy of public confidence.
5. That the aim of a public education program should be not only to acquaint the public with the hospital but also to acquaint the hospital with the public.
6. That the hospitals of each community plan their programs of public education sufficiently in advance and base such programs on the specific problems pertaining to their individual community.
7. That specific attention be focused in all programs on the value of the voluntary hospital.
8. That the Committee on Public Education of the American Hospital Association act in an advisory capacity throughout the year to all communities sponsoring such a program.
9. That hospitals and hospital associations be encouraged to provide budgets for such a program.
10. That all hospitals cooperate with the Committee on Public Education of the American Hospital Association to keep a complete inventory of all activities pertaining to the education of the public and to render from time to time a careful appraisal of results.

4. Producing Publicity, *by Ada Belle McCleery**

It may be taken for granted that in entering upon a program of public relations the hospital administrator has a clear understanding of the objective. Usually this objective is the

* Adapted from *Mod. Hosp.* 50:59-60, Feb. 1938.

correct interpretation of the activities of the hospital based upon the purpose for which the hospital was founded and on the developments that have come with a changing social order. The approach to the objective is made through investigation and research. These two words imply that a systematic search is being made for truth.

Even before research begins the hospital administrator becomes a part of the program. For he plans either to do the work himself or to guide, inspire, or stimulate the one to whom the work is assigned. In either case it is essential that he formulate a plan. Such a plan should include not only the decision as to who will carry the responsibility of the detailed work but also the setting up of those factors that are of public interest in the particular community in which the hospital is located. The public has a right to this information as the public pays for it. It is only by knowing the questions that the machinery can be set in motion that will produce the answers. To illustrate, if a hospital is crowded to capacity, the natural assumption is that the hospital must be enlarged. But the public, before producing funds, asks about population forecasts, about the character predicted for the community, about the facilities available in other hospitals. The public asks questions, also, about the hospital itself: Is there vacant space that might be utilized? How long has the crowded condition existed? Has the pressure come suddenly, or has it grown like a snowball? And how nearly does the hospital finance itself?

It is apparent that the publicity worker must have time for research, must be familiar with sources of material, must know how to assemble data in usable form and must know how to evaluate it after it is assembled. It is evident, also, that files, clerical assistance and, at times, other assisting personnel will be required. One of the first problems that confronts the administrator is the financing of a public relations program.

Financing the program should be considered as the first step. No public relations program worthy of the name can be carried on successfully unless some money is spent. Planning the program is the second step. The general program for a year, or for five, should be laid out. It should be decided which aspect of the program is to be started first, second, and third, and when each is to be completed. An agreement on such details not only will prevent time from being spent on the collection of useless data but it will simplify the checking of progress made.

Naturally, the factors that are of public interest are not the same in all hospitals. They will differ just as institutions differ. But that fact in itself is a challenge and adds zest to the search. For it is these facts, or truths, that are used for public education. They may be dressed up, simplified, illustrated, but they remain the foundation material for all publicity.

Publicity, as a rule, is carried on for some end. It is an effort to gain attention, to give information, to create an interest, to sell services, to obtain financial assistance, or to obtain good will. Whatever may be the goal, it is necessary to have something

worth saying and to say it in a way that will command attention. This statement applies to all publicity mediums. It is just as applicable when the appeal is made through the eye as when it is made through the ear.

Administrators interested in publicity for their own programs are likely to forget that the information they give so zealously is information for which the public is not waiting eagerly. This attitude on the part of the public is a real obstacle. Whatever medium is used for broadcasting, an effort must be made to create a desire in the recipient to look or to listen, not forgetting that after attention is obtained it cannot be held unless the material is interesting. Of course it must be honest. Facts should not be twisted, sources of information should not be concealed, and technical language should not be used. These principles are fundamental.

Others have stressed the various publicity mediums commonly used—letters, posters, newspapers, public addresses—but there are two groups who act as mediums who are too often overlooked. These two groups are the hospital's keenest critics and its most loyal supporters. They are those whom the hospital serves and those with whom it works. They know hospitals as they are. Probably to a greater extent than any administrator is aware, members of these two groups influence public thinking. Publicity is not wasted when it is used to help them understand what the hospital is trying to do. In daily contacts hospital administration may be honest and accurate, and yet fail in its public relationships. Although it may be imperceptible to others, two individuals know when the feeling between them is right. The right feeling follows understanding. It is the right feeling also that divides our friends from our enemies. It is unfortunate when the enemies are within our own institutions.

The second publicity medium I should like to emphasize is the house organ. The term "house organ" is applicable to any publication issued by any business or agency for the purpose of expressing its point of view. It is said that one of the first house organs ever distributed was *Poor Richard's Almanac*. It was a house organ for Benjamin Franklin's print shop. One of the advantages of the house organ is the regularity of its appearance. It is believed that the issues should follow one another often enough to make reading a habit. A three-month period between publications does not help in habit formation. The time element is too great. Publication once a month is recommended, the bulletin appearing each month at approximately the same time.

To be effective, a house organ must have a policy to which it adheres. For instance, the policy might include such things as the kind of information to be disseminated, the manner in which it is to be presented; or it might be reduced to such simple terms as not to brag and not to beg. Certain preliminary decisions must be made in starting a house organ. It is good publicity to select a name easily pronounced and easily remembered, one that carries some meaning and is not too stereotyped. After the name is selected, the size, number of pages, and the frequency of publication must be determined, all being governed somewhat by the amount of money budgeted. A house organ should not be financed by advertisements or by paid subscriptions. In a sense they defeat

the purpose for which the organ is published. As far as size is concerned, large sheets do not mail flat and folding mars the appearance of the illustrations. However, small sheets do not carry large pictures.

It is believed that house organs serve their purpose best when the style is simple. They must be easy to read or they won't be read. In this connection the type is important in both style and size; neither can column arrangement or page arrangement be ignored, but these are technical details. Illustrations should be used freely and are well worth their cost. If either patient or client is the subject for a picture permission in writing should be obtained before the picture is released. No picture should be published if its publication would in any sense harm the persons featured. Not infrequently suitable photographs may be obtained from commercial photographers and unfortunate situations averted.

A house organ does not write itself. For that reason a salaried editor should be selected who knows how to write with sincerity, with simplicity, and with sympathy. Because the publication is the "voice," as it were, of the institution sponsoring it, someone in authority, probably the administrator, should read every word before it is sent to the printer, to see that all information is accurate and that it is ethical in every respect. The administrator should expect to share in the writing and to him falls naturally the outlining of the contents month by month. He soon learns to keep his mind attuned to the news value of everyday happenings. A house organ potentially is a great success or a great liability. The responsibility for its success or failure is shared by the editor and the administrator.

There is the danger always of becoming so absorbed in the mechanics of publishing and editing that the continuous processes of the research and publicity are neglected. Both must be carried on as long as the institution functions. Each year brings changes in the people who make up the community. The new arrivals must have repeated for their benefit lessons older residents have learned. There are, in addition, new lessons to be taught because a constant change is going on in progressive hospitals. This change includes discarding the obsolete, developing new methods, adapting new discoveries to old methods, and finding new uses for that which is worth preserving. It is by an uninterrupted process that the public comes to acknowledge the hospital, and hospitals keep from becoming sterile.

If a hospital is to have a well-rounded public relations program the administrator must carry part of the responsibility. He should have a few original ideas and a great deal of driving power. He should have the faculty of working with others without friction and a willingness to share the "honor and the glory" with others. It is work he cannot do unaided. While it is creative in character, it also embodies social planning. Thus far no permanent effective social plan has been both written and executed by a dictator.

5. Radio Attack on Hospital Leads to Air Code*

THE Philadelphia Hospital Council reports a recent vicious, unjustified attack upon one of the hospitals in the Philadelphia area by a news commentator for a radio station in Phila-

* Adapted from an editorial in *Hospitals* 10:69, Feb. 1936.

delphia. The Hospital Council and the County Medical Society jointly protested the attack and adopted a "code of principles," prepared by the Council, for all radio stations to follow in broadcasting news involving hospitals and the medical profession. The principles were applauded by a legal representative of the station which had previously admitted that subsequent investigation proved the radioed facts to be entirely false. The code of radio principles follows in part:

NOW BE IT RESOLVED, that the Hospital Council of Philadelphia promulgates the following principles of sound practice and procedure, which it invites the several broadcasting stations in this vicinity to subscribe to and observe, and which it directs its officers to recommend to the Federal Communications Commission for such action as said Commission may deem necessary and desirable in the public interest:

1. That news broadcasts and comments by news commentators may be made, without prior reference of the text to the hospitals concerned, in which statements are made that certain named individuals were taken to or admitted as patients by specified hospitals, without any comments by the announcer or commentator with respect to the treatment or the character of service afforded by such hospitals to such patients and without any criticism by such news commentators or announcers with respect to the care and treatment afforded by such hospitals.

2. That each and every statement proposed to be made by a radio announcer or news commentator which in any way adversely reflects upon or criticizes the administration of any or all of such hospitals, or the policies pursued thereby with respect to the admission or non-admission of charity or other patients, or the service or treatment afforded by such hospitals to any of its or their patients, shall first be reduced to writing by such announcer or commentator in the exact form in which he proposes to broadcast the same and thereupon shall be submitted by him either to the President or to the Superintendent of each of the hospitals concerned for the hospital's information. A reasonable opportunity shall be afforded such hospital officials to consult the records of the hospital and thereafter to call said announcer's or news commentator's attention, in writing or otherwise, to any errors or misconceptions of fact contained in said proposed announcement with respect to the matters under discussion, or the policies which, in fact, are pursued by such hospital, and no broadcast or announcement shall be made until a reasonable opportunity has been afforded to such representative of the hospital so to do.

The failure or neglect on the part of a hospital within forty-eight hours to advise such news commentator or announcer, or the radio station with which he is affiliated, of any misstatements of fact or other corrections which the hospital desires to have made in such proposed statement or announcement may be considered by the broadcasting station as evidence that the hospital assents to the broadcasting of the statement in the form submitted thereto.

The Hospital Council deplors any and all attempts by news commentators or announcers to spice up their programs and attract public attention by making sensational or inflammatory statements with respect to (1) the admission or non-admission of charity or other patients; or (2) the service or treatment afforded by the hospitals thereto; or (3) the policies pursued by the hospitals. Such state-

ments are subversive of the public interest because they seriously damage the public relations of the hospitals, thereby tending to reduce the aggregate gifts and contributions made by the community for the support of these essential institutions, and because they minimize or present in a false light the importance and value of the service which the hospitals render in promoting the health and welfare of the community.

AND BE IT FURTHER RESOLVED, that the Chairman of the Council be and hereby he is authorized and directed to appoint a Special Committee, composed of members of the Council, to contact the several broadcasting stations and to invite their acceptance of and cooperation with the program herein proposed, which cooperation the Council believes will be promptly forthcoming, in view of the donations of time on the air and money and other aid heretofore given by the radio stations to many hospitals. The Council hereby directs its officers and said Special Committee formally to call these resolutions to the attention of the Federal Communications Commission with a view to the establishment of rules and regulations, thereby governing such broadcasts in the future, and said Committee is empowered to take such steps as in its judgment are necessary or desirable to these ends.

6. The Usefulness of the Women's Board, *by Mrs. Arthur Spiegel**

THE aim of a women's board in a hospital should be to work out a cordial, cooperative relation between the professional members of the staff and the lay members of that board, and through that relation to fit into the program of a hospital. Of primary importance in this relationship is the realization by the board of trustees and the executive director of the need of a women's board, which cannot function effectively as an isolated group but should aim to be a valuable link and a completely coordinated part of the work of the institution.

In order to accomplish this and to give a maximum service to the hospital, there must be a complete understanding between the women's board and the executive director, as it is he who must interpret the women's board to the professional staff. With this relationship established, the professionals will discuss their problems with the lay group with a view to developing a partnership and a cordial cooperative relationship between the groups. This will, of course, simplify the approach of the women's board to hospital problems, and a careful union should then be established. As a result, many important needs of the hospital will be brought to their attention. Some of these will be met at once, and others will give an incentive and opportunities to develop the work of the board.

One fundamental principle to be observed is that no project should be undertaken if it involves work in the hospital until it has been presented to the executive director, and with his approval, to the professional head of the department involved. Through this procedure, mutual respect and confidence will be established and, accordingly, the women's board can develop a feeling of satisfaction in giving adequate, accepted service, and as time passes in sharing and planning the work. In order to achieve these results, there are certain fun-

* Adapted from *Hosp. Management* 44:25, 40, Sept. 1937.

damental principles which every board must respect. Let us consider: (1) the things that should be done; (2) the things that should be avoided; (3) the devices which may be used to introduce a women's board into the work of a hospital.

Things That Should Be Done. Going on the assumption that all women's boards are carefully selected and the selection limited to women who are interested and who will give time and serious consideration to the work, the procedure is then comparatively simple, but the following course of action, as I see it, is of paramount importance to its success.

1. I would like to repeat that there must be a careful and cooperative relationship between the women's board and the executive director of a hospital. The strength of the organization as a whole is dependent in a large measure upon his cordial acceptance and interest.

2. Limit the number of people who contact the executive director to executives of your organization, and only where necessary committee chairmen.

3. Limit the number of people who contact the professional department heads to executives and to committee chairmen. Problems of mutual concern should be worked out in this manner and the best methods of procedure developed through free and frank discussion with the professionals involved.

4. All committees should be carefully selected by a standing committee appointed for that purpose. Board members evincing special interest in projects should be appointed accordingly on those committees.

5. In addition to the regular monthly board meeting, standing committees should meet monthly, at which time the professional of the department in which the committee is working should, at an appointed time, come to discuss the problems of her department and also the assistance desired.

6. When the functioning of a committee is not successful in the minds of the professional groups, every effort should be made to work out an acceptable procedure. If this cannot be done, the committee should be discontinued until an adequate relationship be reestablished.

7. A women's board must not disturb the routine of the hospital, whose primary function is the care of the sick.

8. Board members must show a willingness to give time to their tasks and to offer constructive thought.

9. When misunderstandings arise, it should be the duty of the president of the women's board to investigate and, if necessary, confer with the executive director in clearing them up. Where these difficulties are due to personality clashes, as sometimes happens, changes should be made in the committee personnel.

10. Education of all lay groups in hospitals is imperative. This should be one of the responsibilities of the professional staff, for the results accruing therefrom will more than compensate for the time and effort involved. If this is not done voluntarily, the request must come from the lay group, but all board members should evince a willingness to take advantage of these educational opportunities so offered by the professional staff.

11. A school of nursing department is one of the most important focal points for the education of women's boards. Boards working in hospitals where schools of nursing are established should make every effort to develop an intelligent un-

derstanding of the aims, ideals, and needs of their school. This, of course, can be done only with the complete interest and cooperation of the director of the school of nursing.

12. One substantial way to show an interest in the educational problems of your school of nursing, and to foster it, is through the award of annual scholarships.

13. Where women's boards utilize the service of volunteers in their institutions, professional standards should be interpreted and the volunteers be made aware of the importance of that point of view as well as of their contribution.

Things To Be Avoided

1. Never be a disturbing element in a hospital.
2. Never indulge in promiscuous criticism. Instead, if there appears to be cause for criticism, bring the matter to the attention of the chairman of the committee who, in turn, will bring it to the attention of the responsible department head.
3. At no time work in any department of the hospital where lack of understanding exists. (This usually can be rectified.)
4. Overaggressiveness often caused by lack of understanding on the part of board members must be avoided.
5. Avoid unnecessary contact with the professional staff because this is time-consuming.
6. In selection of committee material, do not misplace responsibility.
7. Never attempt a new piece of work until you and your board are convinced of its value.
8. Never push a new program, no matter how convinced your board may be, until it has been accepted with interest, understanding, and, if possible, enthusiasm by the professional group involved.
9. Never select women for hospital board members who will undertake the work as a fad.
10. Never carry hospital gossip into the community.
11. Never discuss problems brought to your board, professional or otherwise, except with your board members.

Devices Employed for Successful Procedure

1. And I cannot stress this too often—secure the active cooperation of the executive director before proceeding with work in the hospital.
2. In the beginning, new boards should limit their activities by limiting the number of functioning committees; slow but steady growth is the most effective.
3. At first, proceed on educational lines. The educational program should be developed with the active assistance of the department head, who, of necessity, must interpret the work of the hospital to the women's board.
4. When the work of the board is well established, aim to present to your board controversial problems which will stimulate constructive thinking.
5. Try to have at least one new committee annually in the process of organization.
6. Do not hesitate to disband a committee when it has outlived its usefulness.

7. Hold a limited number of board meetings devoted to professional problems presented by a member of the staff, who should be asked to appear not more than once a year.

8. Ask the professional to meet the committees working in their departments monthly.

9. Where a board is well established in a hospital and they wish to introduce a constructive piece of work, they should not be discouraged if rejected at first. If the project is of enough importance and value to the institution in the minds of the women's board, bring it to the attention of the professional at intervals until both groups are in accord, or the idea is modified.

10. When controversial situations arise within the board, it becomes the obligation of the president to interpret the point of view of the professional group of the hospital to the board. This can be simplified by free discussion of the problem first with the executive committee of the board, and then presented to the board.

11. The more frequently the professional worker interprets his or her work to the women's board, the more intelligent the point of view of that board. This is of utmost importance as the women's board in turn can then intelligently interpret the hospital to the members of the community.

Summary. The highest aim of a women's board is to augment the work of the hospital. This can be accomplished only when the work of the women's board is so integrated with the work of the professional staff that common problems are met with intelligence and understanding. The service which may be rendered to the community by such team-work is without limit, and the satisfaction achieved is unending.

7. The Role of the Woman's Auxiliary in the Modern Hospital, *by Mrs. Morris Fishbein**

THE work of any auxiliary may be classified according to the benefits derived, first, by the hospital, second, by the patients, third, by the members. Although it is assumed that the woman who joins an auxiliary expects to realize but little for herself, yet the benefits that accrue to her are not to be ignored. There is the satisfaction of assisting those in need, to say nothing of the social side. Many women doing important work in the community today received their first public experience in hospital auxiliaries and in clubs. The work and usefulness of such groups may also be classified according to the functions and to the fields in which they may be of service, namely, legislation, collection of funds, education, public relations, and volunteer medical service.

The legislative function is definitely of benefit to the hospital, but of course also to the community as a whole. Any legislation detrimental to the medical profession should be opposed by the auxiliary, which will, no doubt, be guided in its actions by the liaison committee with the staff and with the board of the hospital. In the same way, bills cor-

* Adapted from *Hospitals* 10:14-16, June 1936.

rectly promoting preventive medical measures should be supported. Especially important, for example, have been the bills opposing animal experimentation and those against ophthalmia neonatorum.

We all know, because we have learned by experience, that a protest from an individual citizen or even from a thousand may carry weight, but one telegram or letter from an organization of a thousand members usually gets real recognition. Bills concerned with hospital taxation, with the distribution of social security funds for maternal and infant care, for the care of the crippled, blind, and hard of hearing should be familiar to every hospital group and should be carefully considered by them. Then only can we make certain that the funds are used as the law intended, not diverted to other purposes. Just now the discontinuance of certain emergency relief organizations and the selection of other distribution agencies are of greater importance than most persons realize, especially to those whose hospitals obtain funds through such channels. By being alert and active in legislative matters, an auxiliary cannot help but be a distinct asset to the hospital, the patients, and the community.

I would like to impress on you the importance of a liaison committee of the board and staff of the hospital with which the auxiliary may feel free to consult at any time. This should be a close relationship. Doctors, nurses, and the administrator should, in person, bring reports to the auxiliary, and enlightening programs should be given to educate the members. A better understanding and fuller cooperation would be obtained if every member, whether active or not, could become acquainted with the hospital, not only with its aims and functions as written in reports, but by actual visits. These members should know something of the hospital history, its routine, what type of institution it is, the amount of free work done, the amount of private work, who comprise the staff, the cost of maintenance, etc. Members should also be conversant with the medical problems in the community and the extent to which their hospital participates in their solution. How many people in the community are receiving adequate medical service? Are suitable provisions being made for those who are able to pay only a part of the costs?

How can the auxiliary be helpful in solving these problems? The first step in solving any problem is to know the character and scope of the situation. When these are properly studied, they will have the effect of bringing to the hospital patients who otherwise might not come and of diverting to other institutions patients who should properly be sent elsewhere. Such insight into hospital problems makes an auxiliary an asset to the board and hospital rather than a burden. In such a way only can you have an intelligent group that assists rather than hinders, that boosts rather than interferes.

Extension work into other organizations and use of all the means of reaching the public as an audience are other functions the auxiliary might easily and successfully undertake. Parent-teacher organizations are splendid mediums for reaching school children and their families. Radios and newspapers are usually willing to cooperate to disseminate information and news, and the health committees of women's clubs are always grateful for suggested lectures and invitations to assist in useful projects. Auxiliaries to be efficient should

cooperate with community auxiliaries and state associations. The value of such affiliations is stimulating. It permits not only of legitimate advertising, but promotes good will and gains support which every hospital can use.

In this work advantage may be taken of numerous occasions already recognized locally, even nationally. For example, Child Health Day may be utilized to show what the hospital is doing for the child. Mother's Day may be used to promote the obstetrical division; Cancer Week for lectures in clubs and on the radio; National Hospital Day to invite friends, contributors, and others to tour the hospital. These are only a few of the various special days and weeks associated with specific health or hospital problems which may be utilized.

The auxiliary may be useful in spreading good will for the hospital; it may help to secure enactment of important legislation; it may assist in educating many persons to the value of good health, but its chief function, from many points of view, is related to its ability to aid the finances of the hospital. The funds that are developed through membership are the best means, because they are a permanent and dependable source of income. The encouragement of life memberships is exceedingly desirable because of the stability they give the organization. Membership dues may be increased by the inclusion of specific funds—memorial, flower funds, birthday, milk, brace funds, nursing, free-bed, and many others. For instance, years before Mother's Day became a national nuisance, the Mothers' Aid inaugurated a "My Mother Fund," at first to encourage men to affiliate and contribute in honor or in memory of their mothers. For years, until Mother's Day became commercialized and other organizations included similar funds, this was a most lucrative source of income. Today it still adds hundreds of dollars to our treasury, and is the occasion for our annual luncheon meeting.

Many contributions come from small clubs or societies, sentimentally organized to perpetuate the name of some deceased friend or relative. Usually, the purpose of such clubs is not beyond this, so that unless such groups affiliate with larger successful ones, they do not last long. Their subscriptions have meant more than just contributions, because many of such contributors have joined the Mothers' Aid and have been splendid donors. One group every year supplies the social service department with a number of complete layettes and numerous articles of clothing.

Usually the hospital board, staff, or administrator will find the auxiliary anxious to cooperate and always ready to give or raise funds for certain types of equipment not generally provided by the regular funds. And an auxiliary thrives on requests to assist in developing some hospital project. No task is ever too great, nor have I ever known a well-organized auxiliary to fail its board and hospital. The contributions may be small, but the number of donors will be greater, which, by the same logic, means a greater number of friends. Sometimes I have felt that it is almost as difficult to get contributions of \$10 as \$10,000, but I feel that the \$10 ones are important because of the friends they create. One never knows when the person who gives \$10 might give \$10,000.

Some of the greatest thrills I've ever had have been in collecting funds. I have always made it a rule never to go alone. Company gives one courage. Never shall I forget the time

we went to see a gentleman who we thought might give us \$100. We came out with \$2000. But before he did this, he phoned his brother and we got another \$1000. In another instance, one man contributed, then sent us to each of his partners. In fact, we repeated this experience several times, which I believe proves that every contributor, whether member or donor, is a booster of the hospital and an asset to have and to keep. The Mothers' Aid has given the hospital more than \$6000 a year for several years, and before that gave as much as \$1000 a month for more than a year. Besides this, it contributes specifically to the social service department, and has donated special equipment from time to time.

As I was being shown about a large general hospital in the Middle West, I asked the young woman in charge of social service whether or not they had volunteers. The tone of her "yes" made me inquire further. Needless to say that hospital does not have an organized volunteer service and does not know what it misses.

A volunteer service is as good as its organization. To obtain the best results it should be organized according to specific services, and should be accountable to some one of the hospital staff. The volunteers have specific duties to perform and today, with scarcity of funds, these are legion.

I must say that for more than ten years I have dealt with volunteers and have found them efficient, earnest, conscientious, and helpful. I believe that they can be a nuisance, if they are not properly organized, respected, or given real responsibilities. In some hospitals, volunteers are given short training courses for particular services, which add to the efficiency of their labors. Some institutions have a paid worker in charge of volunteers, others, like the Lying-in, have committee chairmen and one in charge of all. She is responsible to the head of the social service department and to the chairman of the committee of the board of the hospital. These volunteers act as guides when medical or social meetings are held at the hospital. They act as hostesses—how important this is, most of us know—to have the right welcome at the front door. Some girls act as librarians, some type, some assist the doctors in gathering statistics, others drive cars for doctors and nurses to make home calls. Some assist in the admitting office and others help with the follow-up work. One young woman has helped a class of prospective mothers to plan and make simple garments for the baby. Still others make bandages and sew hospital supplies. The Mothers' Aid has always made all of such supplies—about 200,000 dressings annually and thousands of other articles.

This year we opened a shop such as I believe every hospital ought to have for the convenience of its patients, nursing and medical staff, and visitors. This again is entirely manned by volunteers and is already proving a grand success. A few years ago the shop was opened with paid help. After several changes it was closed. With volunteers, we have personal interest, enthusiasm, and a will to put it over. We have also found that the happiest part of our membership is that which is actively engaged on some committee, particularly on the volunteer service. We do know that we have not as yet filled all the niches that can be completely filled by volunteers which will add to the comfort of the patients and relieve the paid staff of some minute details which can be left to the volunteers.

Supplementary Note

When this article was published Mrs. Fishbein was President of the Mothers' Aid of the Chicago Lying-in Hospital and Dispensary. Since her retirement from that office she has continued to be most active in the work of that organization. The Mothers' Aid has increased its regular contribution to the hospital to \$7800 per annum and has made special gifts that have raised its total contributions to more than \$10,000 per annum. This has been accomplished without appeal to the public, primarily through the efficient management of the Gift Shop and the publication and sale of the book, *Baby's First Seven Years*.—Editors.

8. Volunteer Service in Hospitals from the Standpoint of a Social Worker, *by Helen Beckley**

THERE is no field of social welfare to which volunteer service has made and is making a greater contribution than that of hospital care for the needy. Founded on the principle of service to the sick poor, hospitals have grown to their modern state. Hospitals have continued to be, to a large degree, organized, financed, directed, and medically staffed by volunteer service. As progress has been made in medicine and in the institutional care of the sick, continuous professional "skills" other than volunteers have been required to make the medical care adequate. Volunteer service continues to be given by boards of directors, governing bodies, physicians, and lay auxiliaries. The social service department, as one of the professional services of the hospital, has grown, like the others, from the roots of volunteer service. It seems to have kept its link with volunteer service strong and continuous to a greater extent than have other hospital services. In fact it often supervises and directs the activities of some types of volunteer service for extensive hospital programs. These types usually fall into the three following groups.

The first: Organized groups, variously known as auxiliaries, boards, advisory committees, or special committees. These volunteers may function only as an advisory body. When this is so, they are a group of thoughtful, informed members who know the hospital's function, the social service department's function, and community needs. Or they may be an interpretive body in the community with a clear program of public relations, or they may be a money-raising group for particular purposes.

The second: Persons who give specified periods of time to work within the institution.

The third: Persons who make gifts to the institution in the form of clothing, supplies, food, or other material aids.

Just why the volunteer organization best fits into the social service department is not entirely clear. It is so recommended by hospital organizations and other authorities in hospital administration. Probably it is because it seems logical as a part of community social and health programs. Certainly to be effective, volunteer service must be organized as a definite part of the hospital, and perhaps the social service department, which frequently is the hospital's representative in community service, is its best focus.

* Adapted from *Canad. Hosp.* 15:24-25, June 1938.

It actually makes little difference under which professional department of the hospital the volunteer service is placed so long as its functions are defined, its scope and activities understood, and its management directed with understanding. As in any other department, there should be clear channels of responsibility directly through to the administrator of the hospital, and through him to the governing board which, as has been pointed out, is ultimately responsible for every activity in the institution.

Many hospital administrators and social workers look to the women's auxiliary or board to supply unmet needs in the hospital, largely through raising funds. Some auxiliaries or boards raise the entire funds for one or more departments of the hospital, and these departments frequently deal with the social and economic needs of patients, such as the social service department, the occupational therapy department, or the patients' library. The social service department keeps the administrator and the auxiliary or board or committee continuously aware of its needs, through regular meetings, through interpreted reports, and through personal contacts. The social service department may depend on the help and planning of an advisory committee. Such a committee knows the function of professional personnel, protects both educational standards and practice, and sees to it that the professional workers are free to render the best service for which they are prepared in the area in which they are competent.

In this first functional group, then, two types of service to be derived from these volunteers have been pointed out. Both involve the recognition of a thinking and informed organized group. The first is convinced by an understanding of the needs to meet new or additional demands appropriate to hospital function through special fund raising. Such funds, although raised privately for specific departments or needs, should become a part of the general hospital income and be administered by the financial department of the institution as is any other income. The second group, or advisory committee, forms one of the links between the hospital and the community which supports it, and serves two purposes: first, because of its special knowledge, it guides and directs the growth of the department of social work; and, second, it interprets this department as a part of well-rounded hospital services as the occasion demands.

The second group is that in which are found those who give regularly of their time to services within the hospital or out-patient department. It is fortunate for hospitals that many persons, especially women, are able and willing to give portions of their time so that hospital and out-patient care may be made both more pleasant and more effective for large groups of patients. The placement of volunteers in medical institutions requires management, planning, and cooperation of all departments. The following is the list of volunteer activities in one hospital:

1. Hostess service.
2. Clerical aides in clinics.
3. Aides at out-patient department registration.
4. Library aides.
5. Aides on private and ward floors.

6. Aides in charge of hospital clipping and publicity scrapbook.
7. Motor transport service.
8. Aides in instruction to children.
9. Aides during visiting hours to direct visitors.
10. Aides as information clerks on operating floor.
11. Aides in supply room.
12. Aides as clerks in admitting office.
13. Aides as clerks in shop.¹

In this institution there is a chairman or director of volunteers, who is directly responsible to the director of social work. She in turn is directly responsible to the administrator of the hospital, and in the program for volunteers has the cooperation of all departments of the hospital.

To these activities may be added others, such as the care and distribution of flowers; the holiday gifts and special celebrations and recreational activities, such as music. Even provision for landscaping and for decorating window-boxes and recreation porches are the continued responsibility of volunteers. In some institutions volunteers act also as nurses' aides, occupational therapy aides, or dietetic department aides.

It will be noted that few if any of the activities mentioned above fall within the scope of the social service department. Here the personnel usually consists of two groups—professional social workers and secretaries. Volunteers with specialized training in either are in great demand. In addition some clerical aides are often used, and the provision of motor transport, both for home visiting of the social workers and for clinic attendance of patients otherwise unable to reach the institution, is particularly valuable.

The first requirement in developing a volunteer unit is that it should have the approval and support of the director of the hospital and, through him, the support of the governing board. It should have a professional head or supervisor in one of the departments of the hospital; this may or may not be the director of social service. It should have a volunteer chairman able and willing to take responsibility for the detailed operation of the service. When these steps have been taken, there logically follows:

1. Find the jobs for volunteers in all departments of the hospital—list and describe them.
2. Recruit the volunteers.
3. Place the volunteer as carefully as any other employee, taking into consideration individual abilities, experience, interest, and time.
4. Train the volunteers for the jobs available.
5. Provide adequate supervision and management. This will include provision for regular attendance and substituting during absence.

It should be pointed out that the service which volunteers give to hospitals does not replace essential work of paid employees, either professional or non-professional. The activi-

¹ The Service Shop is a small gift shop and tea room managed by volunteers as a money-raising project. It has some paid employees.

ties assigned to the volunteers here described are auxiliary services to those already existing.

The third and last group of volunteers are those supplying needs otherwise inadequately met—those who collect and send in clothing and other supplies, Christmas gifts, flowers, fruits, and other things. It is true that a hospital's function is the medical care of the sick, but there are so often emergencies which must be met. For instance persons coming into the hospital in warm weather find themselves going out when the temperature is lower and their summer clothes are inadequate. The pneumonia patient may be in need of extra clothing, as may be the accident victim whose clothing has been badly damaged.

Much of the volunteer's work is far from dramatic and exciting. It is often dull and routine. It is, however, a part of a great humanitarian service important in its place.

If medical care is to be effective, it must extend beyond the walls of the institution into the homes and lives of the patients under care. Just how far this extension of service can go depends upon both professional and lay understanding of this need. The volunteer plays an important part in the understanding and recognition of this need.

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CHAPTER XXVIII. GROUP HOSPITAL AND HEALTH INSURANCE

1. Health Insurance? *by C. Rufus Rorem**

NO one can tell when he will be sick, or what his sickness will cost him. This simple fact underlies the constant agitation for socialized medicine and the recurring demand for some type of health insurance. While, on the average, the citizen of the United States spends comparatively little for the prevention and cure of disease—about \$25 annually, less than he pays for tobacco, sweets, and cosmetics—still he complains about the costs of medical care. Why? Because those costs are uncertain, unpredictable, and almost always untimely.

Any family with a steady income can budget its expenditures for food, rent, clothes, even automobiles, radios, and cosmetics, but it cannot possibly foresee, and so cannot possibly budget, its necessary expenditures for medical care and hospitalization. Certainly it could earmark \$25 for such use, but it might have to spend much more, say, for an unexpected appendectomy—or might have to pay for a broken leg with the monthly savings that were to have gone for the next baby. Sickness, as the head of every household is fearfully aware, can deplete the savings of a lifetime or impoverish a family for years. It is a hazard he cannot reckon in advance.

But this very uncertainty can be and is being removed by group action in which many families each contribute to a common fund which pays the bills for their medical or hospital care. The uncertainty of a large expenditure is thus replaced by the certainty of a small one—which is merely the principle of all insurance. Those who need care are lucky to have their sickness bills paid. Those who are not sick are lucky to be well.

Health insurance is neither new nor uncommon in the United States. Probably 10 million persons have more or less complete protection under voluntary health insurance procedures. Private insurance companies offer individual accident and health policies which reimburse the policyholder for his loss of time on the job and his expenses for medical care. Railroads, mines, and lumber camps for decades have administered plans for their own employees. Many industrial enterprises and educational institutions collect regular dues from employees or students to finance medical and hospital care. Hospital service plans, to be discussed later, are growing rapidly in all parts of the country. Private groups of doctors and cooperative groups of buyers have established voluntary health insurance plans in different parts of the United States. Many fraternal orders operate contributory health plans. Some of the plans have been very good, some rather bad. Usually the quality of care is directly proportionate to the amounts paid for the services. Health insurance is not magic. It brings no rabbits out of the hat that were not first put there by the group. One of

* Adapted from *Health insurance; voluntary plans point the way*. One side of a symposium on health insurance. *The Rotarian Magazine* 55:14-56, 58, Sept. 1939.

the greatest weaknesses in the administration of health insurance in America and Europe has been the desire to get something for nothing.

The only legally compulsory health insurance in the United States is that administered under the workman's compensation laws of the various states, covering about 10 million workers for eight hours a day. These plans provide medical care and hospitalization for all injuries or illnesses arising from employment. Costs are met from payments by the employer to a private insurance company or a state insurance fund.

The United States Government operates no plans for workers' families or plans which protect the worker 24 hours a day, although the American Federation of Labor and the Congress of Industrial Organization have both declared themselves in favor of compulsory health insurance. The only difference between them has been the unwillingness of the latter group to agree to a deduction from the worker's pay envelope for part of the cost. The American Farm Bureau Federation has actively supported voluntary hospital or health insurance, as have many business and industrial groups which view with alarm the political control that might attend legislative compulsion and governmental subsidy.

In July 1938 the Federal Interdepartmental Committee on Health and Welfare presented a comprehensive national health program to the National Health Conference in Washington, D.C. Prominent among the recommendations was health insurance. But the committee rightly listed several other problems as equally important: increased preventive service through public health activities, extended health service for the indigent and unemployed, improved hospital facilities for certain areas not well supplied, and unemployment compensation for workers during periods of sickness.

The National Health Bill (Senate Bill 1620), arising from the conference, contains no direct reference to health service insurance for employed persons, and it is unlikely that any of several health insurance bills now before Congress will be reported upon favorably by the committees to which they have been referred. Compulsory health insurance bills have been introduced annually for 20 years in the various states, and those now before the legislatures have the support of organized labor.

Meanwhile throughout the United States there is developing a limited type of health insurance for hospital bills only, under special legislation which permits nonprofit associations to contract with subscribers and hospitals under the supervision of the state departments of insurance and welfare. Since 1933 nonprofit plans for hospital care insurance have been established in more than 60 cities and communities. The membership in nonprofit hospital service plans had exceeded 4 million subscribers on June 1, 1939, as compared with 100,000 in July 1935. At the present rate of growth the total membership will probably exceed 6 million persons by next January.¹ The plans are coordinated through the Commission on Hospital Service of the American Hospital Association, which administers an approval program for plans which meet and maintain certain standards of public welfare, economic soundness, and professional qualities.

¹ By July 1943 the enrolment in hospital service insurance plans (Blue Cross Plans) was in excess of 12,000,000.—Editors.

No two plans are alike in detail, but all are alike in principle. Employed people pay monthly dues of 50 to 85 cents per person, and entire families are enrolled at amounts ranging from \$1.25 to \$2 a month, depending on the scope and nature of the benefits. Each person is entitled, if necessary, to three or four weeks of hospital service each year, usually in semiprivate rooms, including meals, nursing, operating room, laboratory, and other special services. Benefits do not cover fees to private physicians or nurses. The payment of such bills must be arranged for by the patient individually. Each nonprofit plan is formed as a special association, with trustees selected from the hospitals, medical profession, and general public, who serve without pay as do the trustees of a university, hospital, or social agency. Subscribers are enrolled in groups through their places of employment, and employers cooperate in the collection and payment of monthly dues. Representatives of the plans are paid on a salary basis.

At the time of sickness a subscriber has free choice of any member hospital where his attending physician enjoys staff privileges. The hospital is paid an agreed amount for each day of care to the subscribers. There is no interference in the relationships among hospitals, medical staffs, and patients. An attempt is made to enlist every hospital of standing as a member institution. The essential economic feature of the plans is the joint guaranty of service by the group of member hospitals. These institutions agree to provide the service even though the resources of the plan might be temporarily insufficient to pay the established daily rates. More than 300,000 hospital bills have been paid, and no nonprofit free-choice hospital service plan has failed to meet its obligations to subscribers.

Nonprofit hospital service plans are, as has been noted, a form of insurance, guaranteed by the participating hospitals of each community, which in turn are supported by the general public. They are a substitute for government-controlled hospitalization rather than competitors of stock or mutual insurance companies. The public now owns the hospitals of America through an investment of 3 billion dollars by way of philanthropy and taxation. The voluntary hospital service plans are an attempt to organize the public buying power on a voluntary basis, without the disadvantages of political control.

Health insurance is not the same as state medicine. State medicine in the United States is a plan by which one group—the taxpayers—finances medical care for another group—the unemployed and the indigent. Health insurance is a plan by which an employed group of people finances medical care for itself.

Health insurance is not a panacea for all matters of public health. It does not guarantee a minimum income for doctors or hospitals. It does not lower the total costs of medical or hospital care, because the beneficiaries usually demand and receive more services than formerly. It does not guarantee accurate diagnosis or adequate treatment, even from the world's best-trained medical profession and best-equipped hospitals. It does not lower the death rate or birth rate. It does not provide medical care for the indigent or unemployed. It does not raise the general wage level or equalize the uneven distribution of wealth.

What does health insurance do? It removes the hazard of sickness costs for persons covered by the plan. It provides payments to practitioners and hospitals for many services

that would have been rendered without remuneration. It permits employed people to place health service in their budgets along with other necessities. It reduces the need for paternalism and charity from the doctor, philanthropist, and taxpayer. It encourages early consultation with qualified practitioners rather than the use of patent medicines and quacks. It permits doctors to treat cases without regard to immediate income from the patient. It permits orderly evolution in methods of paying sickness bills without revolutionary changes in the entire economic order. It develops a sense of individual initiative. No one wants complete security in every respect; but everyone desires to remove the causes of needless insecurity.

Most European countries have some degree of health insurance, with legally required participation by certain employed groups. In no European country have health insurance plans ever been curtailed or discontinued, although they have all been revised and many expanded. It is sometimes said that health insurance has failed in Europe. It would be more accurate to say that Europe has failed in some phases of health insurance. There plans were established against the firm opposition rather than under the guidance of medical practitioners. Consequently, many mistakes were made that might have been avoided if the medical profession had cooperated on policies and procedures.

One of the primary objectives of European plans was to restore the worker's income rather than his health. This emphasis resulted partly from the fact that state medicine was already well developed for hospitalized illness before the health insurance plans emerged. Consequently, the health service benefits were rather limited. For example, in England health insurance services include only general practitioners' service for the employee and not his family. The European plans were established to relieve the taxpayers as a group. The American objective has been to relieve the individual patient requiring care.

What are the prospects that voluntary hospital service plans will expand to include the services of practitioners in the hospitals and the homes? They are very slight. The hospitals of America are not in a position to guarantee the services of private physicians, surgeons, dentists, or nurses. Any such arrangement with the public would require the leadership and financial responsibility of the medical profession, and would need to be parallel rather than subordinate to hospital service plans. However, such an arrangement is working in Seattle, Washington. There the King County Medical Service Bureau has a panel of 300 doctors and about 40,000 employed persons enrolled in a voluntary health insurance plan. Newspaper reports indicate that several local and state medical societies are planning community-wide free-choice insurance plans for medical care open to the general public.

Voluntary groups interested in the principle of insurance, but opposed to compulsory action by statute, have an opportunity and a challenge to develop an American plan of health insurance. Whether this will be a substitute, forerunner, or partner of compulsory plans, time will tell.

One cannot be *for* or *against* health insurance any more than *for* or *against* the multiplication table, railroads, or philanthropy. It is neither Mecca nor mirage. It is the line of march, not the goal; the means, not the end. Health insurance is a method of financing

health service in a manner which will reduce the hazard of sickness costs to the individual patient or his family. If it serves this purpose in whole or in part, it is worth while. But there will always be administrative and human problems to be solved in the march toward individual security.

2. Hospital Care Insurance and Social Security, *by Louis S. Reed**

THE Social Security Program is designed to guarantee the individual security through social action. It is made necessary by the facts of modern life and work which bring it about that many of the problems of livelihood for the individual can be solved only by collective action.

The nation's endeavor to provide security of livelihood to its citizens began long ago. The establishment over the last 30 years of state systems of workmen's compensation, whereby employees injured in the course of their employment are furnished medical service and cash benefits to replace earnings, marks an important milestone in the endeavor. An epoch-making step in the same direction was the passage of the Social Security Act of 1935. As a direct result of that act, all of the states now possess systems of unemployment compensation designed to tide workers over periods of temporary unemployment. It had become apparent by 1935 that, for one reason or another—low earnings, the dissipation and loss of savings, improvidence—a large proportion of individuals could not or did not provide for their old age and, when they reached old age, faced destitution. It was apparent that voluntary insurance was inadequate to meet this situation. Accordingly, there was established through the Social Security Act a federal system of compulsory old-age insurance, embracing all employed workers except those in agriculture, domestic service, and a few other lines of work. Under this system employees pay contributions proportionate to their earnings, employers match these contributions, and from the funds thus accumulated pensions are paid to workers on retirement at 65 or over. These and other supplementary measures are incomplete in the sense that many workers who need aid are outside their scope, and they will undoubtedly be changed as experience dictates. But taken all in all, they represent substantial attempts to deal with the problems of security toward which they are directed.

There is, however, one part of the problem of insecurity with which the nation has not yet attempted to deal in any substantial fashion—that of insecurity arising from sickness. This problem is a twofold one: first, that created by cessation of earnings as a result of sickness or invalidity—the need here is for some system of insurance which will provide workers with an income to live on during periods in which they are unable to work; second, there is the need for medical care—the problem of making such care available to all on proper and economically sound terms. It is the second of these problems with which we are concerned here.

One of the most significant episodes in the National Health Conference held in Wash-

* Adapted from *Hospitals* 13:25-29, Feb. 1939.

ington in July 1938 was the silence which followed a certain question. A full day had been devoted to statements of health needs; representatives of labor organizations, farm groups, civic and welfare bodies, and of the medical profession had one by one risen and given what became in the aggregate a dramatic picture of unmet needs. At the end the chairman asked: "Does anyone seriously challenge the statements of need that were made in the papers this morning and were amplified this afternoon?" No one spoke.

The time has passed when it is needful to prove or even elaborate upon the existence of pressing national needs for more and better medical care. We know that a large proportion of our people are not receiving adequate care, for lack of which tens of thousands of deaths and untold suffering and misery occur. We know in an approximate way the dimensions of the unmet needs; we know in general that they are in direct proportion to lowness of income, that on the whole they are greater in rural than in urban areas. We know also that the problem of meeting these needs, of making adequate care available to everyone, is at least as important as any of those already dealt with under the social security program. In the last analysis, it is as important that people should have available throughout their lives the care necessary to health and life as that they should be provided with the wherewithal to live when they reach old age or become unemployed. It is significant that in almost all other countries health insurance was the first form of social insurance to develop widely, and generally the first to be made compulsory.

Not only must adequate medical care be made available to everyone, but it must be obtainable on terms which do not inflict financial hardship or cause sacrifice of independence, self-respect, and self-reliance. Existing arrangements for the provision of medical care have given birth to a new term, "the medically indigent," meaning people who are self-supporting, who pay their own way with respect to everything else, but who are unable to pay for their medical care. We should aim to make this term obsolete. Widespread evidence of many kinds shows that people do not want medical care as a charitable dispensation of physicians, hospitals, welfare organizations, or the government. Any system which rests on the assumption of medical indigency for any appreciable portion of the population will not, I think, be found congenial to American ways of thought. If the problem is to be solved, adequate care must be made available to self-supporting people as a right, as something to which they are entitled because they have contributed directly toward its cost.

There is still another condition to be satisfied; it is that care shall be available on terms which do not inflict undue financial hardship. At present no one knows what his medical bills will be during the year; they may be an insignificant amount or may come—such cases happen—to more than his year's income. Surveys show that among families of moderate income about two out of every hundred, in a given year, incur expenses for medical treatment equal to 25 per cent or more of their whole year's income, and that one family in every two hundred will take on medical obligations amounting to 50 per cent or more of income. Many more in each hundred are forced to take on lesser but still burdensome obligations. Such costs constitute burdens too heavy to be borne; they are comparable, if

you will, to the losses arising from unemployment against which a system of insurance has been devised. In the same way, people need protection against the hazard of heavy medical costs. This protection can be given either through a system of insurance or by payment of medical costs through taxation.

These two aspects of the problem—the need for adequate care and protection against the burden of heavy sickness costs—are, of course, closely related. The inability to budget sickness costs results often in inability to obtain service, and fear of running up bills often leads people to postpone getting medical advice, sometimes with disastrous results. I have had the opportunity of reading letters which some of the hospital care insurance plans have received from satisfied subscribers. A point stressed again and again in those letters is how the writer's recovery was aided by relief from worry over how the hospital bill was to be paid. There is hardly a step which could be taken which would bring more mental comfort to more people than the establishment of some plan whereby people periodically pay fixed amounts within their means, and in return have the assurance that if they get sick they can call a doctor and obtain without further cost whatever medical service they may require.

Such, in brief outline, is the problem of providing security against sickness.

What contribution does hospital care insurance make to the solution of this problem? What contribution can it make? I am speaking here of the nonprofit plans of the type approved by the Committee on Hospital Service of the American Hospital Association.

At the present time there are some 50-odd approved plans whose subscribers, including dependents, number slightly over 3,200,000. This represents an insignificant proportion of the country's total population. Furthermore, the plans cover only one item of medical costs. On the average, hospitalization costs account for only about 13 per cent of average expenditures for all items of medical care, and for only about 21 per cent of the total spent for hospitalization, physicians' services, and nursing. So, as regards present accomplishments, it may be said that hospital care insurance is now solving only a small part of the problem for a very small fraction of the total population.

But such an appraisal is manifestly unfair in that it takes no account of the recent origin of hospital care insurance and of all its potentialities for the future. For all practical purposes, hospital care insurance of the approved free choice type began in 1932. In seven years the number of subscribers has grown from zero to over two million. Within the past twelve months membership in the plans has doubled. We have long had a certain amount of voluntary health insurance in this country in the form of industrial medical services, contract practice in the mining and lumber industries, student health services in the universities, and the like. Many of these plans are of long standing. Now within seven years the number of people covered by hospital care insurance has reached and passed the total number of people embraced by all other forms of voluntary health insurance.

Thus far hospital care insurance plans have been started in only a relatively small number of communities, and many of the plans are barely under way. At present the subscribers to this insurance are rather closely concentrated in a small number of communi-

ties: 40 per cent of the total are in the New York plan, and approximately 65 per cent are in the four plans with the largest number of subscribers, namely, the plans of New York, Minnesota, Cleveland, and Rochester. In a few communities the plans have succeeded in enrolling substantial portions of the population. The Rochester plan has enrolled slightly over 25 per cent of the people in the metropolitan area of that city. Over 23 per cent of all the persons in the metropolitan area of Syracuse, New York, are covered by the plan of that city. Approximately 22 per cent of the population in the metropolitan area of Minneapolis and St. Paul have joined the Minnesota plan. Approximately 10 per cent of the population of Cleveland and its metropolitan area belong to the Cleveland plan. Of the 8,000,000 people residing in the metropolitan area of New York City, exclusive of its New Jersey division, some 900,000, or approximately 11 per cent, are subscribers to the Associated Hospital Service of New York. When we take into account that many persons in these communities are not eligible for membership because they lack employment or do not belong to groups suitable for enrollment, the degree of coverage achieved in these and a few other communities represents no mean accomplishment.

There is no reason to believe that what has been achieved in some communities cannot be achieved in others. If we take the accomplishments of some plans as an indication of the potentialities of the movement throughout the country, then the potentialities of hospital care insurance are large indeed.

Among the factors which must be taken into account in any appraisal of the present status of hospital care insurance are these:

1. The movement has adopted a formula which is right and suitable, and which permits indefinite expansion. The essentials of this formula are that the plans shall be not for profit; that they shall be community-wide with only one plan in a community; that a majority of the hospitals in the area shall participate and that subscribers shall have free choice of participating hospitals; and finally that the controlling organizations shall include adequate representation of the public, the hospitals, and the medical profession. All of these principles are sound and advantageous; there can be no fair objection to any of them. Based on these principles, hospital care insurance is bound to develop as a community undertaking, with service to the public as its dominant aim, and organized in such a way as to avoid duplication of effort and to provide for coordinated planning and effort on the part of all concerned.

Not only are the basic principles of hospital care insurance sound in theory, but they have already proved themselves in practice. In the plans which are well under way and have achieved substantial coverage, operating expenses, including acquisition costs, have been brought close to 10 per cent of gross income. This is an expense ratio far below that which customarily prevails in private competitive insurance of related kinds. It is significant that practically without exception the approved plans are able to offer their subscribers better value for the money than plans operated for profit, and that their growth has far exceeded that of the latter.

2. Hospital care insurance now possesses a substantial backlog of public familiarity and

confidence. Today people in all parts of the country know about the two- or three-cents-a-day plan for hospital care; the idea of budgeting for the cost of hospitalization has become widely accepted. Similarly, the development has won the acceptance and backing throughout the nation of hospital authorities and physicians.

3. As a result of seven years' operation, a substantial body of experience data has been obtained. Much more is known now than seven years ago as to the volume of demand for hospitalization to be expected under a prepayment plan. The possession of these data, by eliminating guesswork, makes the starting of new plans easier and makes it unnecessary for plans wishing to be on the safe side to set their rate and benefit schedules on so conservative a level as to make the plans unduly costly. Of the same nature is the fact that techniques of operation have been worked out. It is easier for plans to start today than formerly because new plans are able to draw upon the accumulated experience of established plans.

4. A fear in the minds of many plan executives has been that an epidemic or an act of God might occur which would lead to a demand for hospital service greatly in excess of normal. To safeguard their plans against such a contingency, they have kept rates at levels such as would permit a rapid accumulation of a suitable reserve. Now many plans have accumulated this reserve and are in a position where they can lower rates or extend the benefits, thus making enrollment still more attractive to the public.

5. In the course of their short histories, many of the plans, I believe, have undergone an orientation of philosophy which augurs well for the future. In many instances the original impulse leading to the starting of the plan was the hope on the part of hospitals of increasing revenue and balancing budgets. Gradually over the whole field there has been a change of emphasis and it is being recognized that the prime purpose of hospital care insurance is to serve the public, and that the hospitals will gain as an incident to the accomplishment of this purpose.

6. A sixth item in this bill of achievements is that hospital care insurance, by its success, has laid the basis for its broadening into voluntary health insurance. By itself, insurance against the cost of hospitalization is limited and incomplete. This has been an inhibiting factor to growth for it meant that the plans were giving the public less than what it wanted. It is obvious that if hospital care insurance is good, a plan offering a more complete coverage of the medical care bill would be better. Today, a committee of the five county medical societies in New York City is collaborating with the New York plan in the endeavor to work out a plan which will furnish ward care and physicians' services in the hospital. A committee of the Cleveland Academy of Medicine has recently prepared a plan of insurance against the cost of physicians' services to be set up in conjunction with the existing group hospitalization plan. The medical profession in Washington, D.C., and Rochester, New York, and possibly some other cities, are working out similar plans. The main factor in this development, of course, has been public demand, but hospital care insurance, by its demonstration that insurance in this field is practical and workable, has contributed in no small degree.¹

¹ Since this article was published nonprofit medical care plans have been established in Michigan, Massachusetts, Pennsylvania, North Carolina, Colorado, and in Kansas City, Missouri. A surgical indemnity plan

It would seem obvious that insurance against the cost of physicians' services must develop in combination with hospital care insurance. For one thing, it is unlikely that the public will bother with paying two separate contributions into separate systems and that employers will be willing to make two separate payroll deductions. Further, there are, of course, distinct advantages and economies in utilizing a single administrative machinery. Accordingly, the day is rapidly approaching, I believe, when we shall cease to speak of community plans of hospital care insurance and shall speak instead of community plans of voluntary health insurance.

One final point may be presented either as an accomplishment or a challenge. It is an accomplishment in the sense that hospital care plan executives are aware of the problem and are endeavoring to meet it. Hospital care insurance, thus far, has been attractive mainly to persons in a middle-income group. The plans have been far more successful in reaching white collar and professional workers, namely, persons employed in schools, banks, government offices, and commercial establishments, than in reaching wage earners. I do not mean to imply that the plans are not enrolling wage earners—the plans, especially those which have achieved a substantial degree of coverage in their communities, have enrolled large numbers, but proportionately the plans thus far have been considerably more successful in attracting people of middle than of low-income status. To the extent to which this is so, the plans are not primarily benefiting the group which stands in greatest need of protection.

At present the costs under most of the plans are too high to make enrollment attractive to wage earners, or, in general, to the poorer half of the population. A recent study of the U. S. National Resources Committee shows that in 1935-36, 42 per cent of all families in the country had incomes in that year of less than \$1000, 55 per cent had incomes under \$1250, and 65 per cent received less than \$1500. It is extremely doubtful whether families with incomes under \$1000 or \$1250 a year can afford hospital care insurance at rates of \$18 to \$24 a year for full family coverage, which are the rates charged by most of the plans. In this connection it must be borne in mind that hospital costs average less than one-fifth of total family expenditures for all medical care, and that expenditures of \$18 to \$24 for hospital care alone would, on a proportionate basis, call for total expenditures for medical care of \$90 to \$120 a year for a family.

It would seem obvious that, if hospital care insurance is to be of substantial benefit to wage earners, some way must be found of giving this protection at substantially lower cost than at present. Furthermore, it is doubtful whether such insurance can be made attractive to wage earners as long as it is limited to hospitalization only and leaves them in the position where, though having paid the hospital bill, they are still unable to meet the cost of physicians' services in the hospital. A plan furnishing ward care (cannot some more attractive term be devised?) and physicians' services seems to be the answer. It is encouraging to

sponsored by a nonprofit corporation (Community Medical Care, Inc.) has been established in New York City. Twelve Blue Cross Plans are coordinating their activities with locally sponsored medical care plans.—
Editors.

find executives of hospital care insurance plans giving thought to the possibility of developing such plans.

As a result of all these factors, a basis has been laid for an exceedingly rapid development of voluntary health insurance in this country in the next few years. Predictions of 10 or 20 million subscribers to the plans within a few years are not unduly optimistic. If this happens, as I think it will, we shall be entitled to think of this development as one of the most significant in the field of health care in recent years. As Dr. Parran has well stated, not all progress in medicine is made in the research laboratory or the operating room. The development of hospital care insurance represents progress in putting medical science to work.

However, hospital care insurance broadened to include physicians' services, although it can help in solving the nation's medical care problem, is certainly not a panacea. It is not in itself a solution to the entire problem.

What the limitations of this insurance will prove to be, it is difficult to say. It remains to be seen whether arrangements can be devised which will make possible the enrollment in the plans of any substantial portion of the farm population and of those in rural areas. We do not know whether techniques can be devised which will make it possible to bring the benefits of this insurance to the self-employed. Again, no matter what progress is made in the developing of low-cost insurance plans, unaided these plans can be of little help to the substantial numbers of people who are self-supporting and independent, but, nevertheless, have incomes so low that they are unable to afford the full cost of medical and hospital service even on an insurance basis. If these people are to receive needed care, part or all of the cost will have to be borne by tax funds. It may be that the development of comprehensive tax-supported services for this group is what the public wants. On the other hand, an alternative approach would be for governmental authorities to make contributions into the voluntary hospital care or health insurance plans on behalf of wage earners enrolled in low-cost plans. If this means that substantial numbers of persons, for whom government would otherwise have to bear the full cost, could be led to pay part of the cost of their care, it would seem to be a very desirable course of action all around.

In summary, hospital care insurance broadened into health insurance is potentially capable of making a substantial contribution to the provision of security against sickness. Its real test will be the degree of coverage it is able to effect among the self-supporting urban population. In other words, its contribution to the solution of the pressing national problems of health security will be exactly proportional to the size of the population it is able to bring within its scope and the breadth of the sickness services it can actually embrace.

3. That Makes It Unanimous*

In 1933 the American Hospital Association, acting through its council on community relations and administrative practice, approved the principle of "group hospitalization" and

* Adapted from *Mod. Hosp.* 49:50-51, Dec. 1937.

adopted a set of guiding principles. These principles, although they have been somewhat modified and expanded during the intervening years, still serve as the guideposts of the committee on hospital service. In 1937 the bureau of medical economics of the American Medical Association published a study embodying a series of ten principles. The hospital field will be interested in reading the two sets of principles and noting the many points of similarity.

1933 Statement of A.H.A.

1. **Emphasis on Public Welfare:** Group hospitalization should be organized, in principle and in fact, as a public service. Subscribers should be invited to participate in the administration of group hospitalization plans.

2. **Limitation to Hospital Charges:** The plans which the council of the American Hospital Association has approved cover payments for hospital care only and do not include payments for the professional services of physicians and surgeons rendered to patients. The usual relations between physician and patient are not altered.

3. **Enlistment of Professional and Public Interests:** In establishing plans in any locality advice should be sought and interest should be enlisted from the medical profession, hospital trustees, and other qualified persons or groups interested in public service, such as social workers, nurses, lawyers, insurance men, and industrialists.

4. **Choice of Physician and Hospital:** Subscribers may be hospitalized only when attended by a physician. The subscriber's freedom to choose his physician or hospital remains unchanged. The practice in each institution with regard to open-staff and closed-staff privileges is not changed. Existing medical staff relations and hospital rules are not affected by group hospitalization.

5. **Nonprofit Organization:** Group hospitalization plans should be organized and introduced on a nonprofit basis by some existing hospital or welfare association or by one especially formed for the purpose. No individual or group should be allowed to enjoy any "profit" or financial gain from a group hospitalization plan, other than a reasonable and proper return for the necessary services rendered.

After reasonable remuneration has been made to participating hospitals, financial benefits from operation of the plan should accrue to the subscribers. The benefits may be shared either through reduction of subscriptions or increase in hospital benefits.

6. **Economic Soundness:** Each plan should be economically sound with regard to such details as subscription rates, scope of benefits, remuneration of hospitals, eligibility of subscribers, and accumulation of reserves. Compliance with legal requirements is essential. During the experimental stage of any plan, the provisions should be subject to change on reasonable notice, in order that both subscribers and hospitals may be protected from developing conditions that would be detrimental if unchecked.

7. **Cooperative and Dignified Promotion:** Plans should encourage participation by all hospitals of standing in the community. The ultimate responsibility is assumed by the participating hospitals which agree to render service to subscribers in exchange for the

subscriptions collected. The plans should be introduced in a dignified manner, in keeping with the professional ideals of hospital service. Publicity should be limited to the plan itself rather than to participating hospitals. Field representatives may be engaged to introduce a plan as either volunteer or salaried workers, or for specified reasonable remuneration for their services.

The promotion of the group plan should not be placed in the hands of a separate agency which assumes the role of contractor for the hospital care. Representatives of the plan should not be allowed to influence the amount or quality of hospital service that is rendered by subscribers.

Principles Published by A.M.A.

1. The plan of organization should conform to state statutes and case law. The majority of the governing body of the hospital insurance plan should be chosen from among members of official hospital groups and members of medical societies. Great care should be taken to assure the nonprofit character of these new ventures.
2. The plan should include all reputable hospitals. The qualifications of the participating hospitals should be closely supervised. Member hospitals should be limited to those on the Hospital Register of the American Medical Association or to those approved by the state departments of public health or other state agencies in those states in which there is approval, registration, or licensing of hospitals.
3. The medical profession should have a voice in the organization and administration of the plan. As hospitals were founded to serve as facilitating means to the practice of medicine, the medical profession must concern itself intimately with plans likely to affect the relations of hospitals to physicians.
4. The subscriber's contract should exclude all medical services; contract provisions should be limited exclusively to hospital facilities. If hospital service is limited to include only hospital room accommodations such as bed, board, operating room, medicine, surgical dressings, and general nursing care, the distinction between hospital service and medical service will be clear.
5. The plan should be operated on an insurance accounting basis with due consideration for earned and unearned premiums, administrative costs, and reserves for contingencies and unanticipated losses. Supervision by state insurance departments has been advantageous for both the buyer and the seller of insurance contracts. Laws permitting the formation of hospital service corporations should not remove the benefits of such supervision or violate the principles enumerated.
6. There should be an upper income limit for subscribers. If group hospitalization plans are designed to aid persons with limited means to secure hospital services, they should render such service at less than regular rates. If no consideration in rates is made for persons with limited means, group hospitalization plans lose their altruistic purpose and there may be little justification for an income limit.
7. There should be no commercial or high-pressure salesmanship or exorbitant or mis-

leading advertising to secure subscribers. Such tactics are contrary to medical and hospital ethics and are against sound public policy.

8. There should be no diversion of funds to individuals or corporations seeking to secure subscribers for a profit. The moment hospitals lose their traditional character as institutions of charity and humanitarianism, the entire voluntary hospital system will break down.

9. Group hospitalization plans should not be utilized primarily or chiefly as means to increase bed occupancy or to liquidate hospital indebtedness. Such plans, if they are necessary, should place emphasis on public welfare and not on hospital finances.

10. Group hospitalization plans should not be considered a panacea for the economic ills of hospitals. They can serve only a small portion of those persons needing hospital services. Hospitals must continue to develop efficient methods of administration and service independent of any insurance method of selling their accommodations.

4. Hospital Care Insurance Provides Service Not Cash, *by C. Rufus Rorem**

NONPROFIT hospital care insurance plans resemble stock or mutual insurance companies in that they offer individual or group accident and health insurance. There is a fundamental economic difference, however, between the nonprofit hospital service contract plan and the cash indemnity or hospitalization expense policies offered by stock and mutual insurance companies. In the plans approved by the American Hospital Association, participating hospitals underwrite the services; they guarantee to fulfill the contracts and they "hold the bag." It is this definite assumption of responsibility by the participating hospitals which makes it necessary that the American Hospital Association supervise the public administrative policies of these plans.

The emphasis on public welfare is exemplified by the family contract—a flat rate per month per family, regardless of the number or sex of the dependents. Typical contracts are those of the Pittsburgh and St. Paul plans which give "full" and "half" dependent coverage, respectively. The Pittsburgh Hospital Service Association enrolls employed subscribers (either sex) at 75 cents a month, husband and wife for \$1.40, and husband, wife, and dependent children under 19 for \$1.75. The Minnesota Hospital Service Association charges 75 cents per month per employed person, yet covers an entire family with one or more dependents for an additional 25 cents per month, a total of \$1. Dependents receive half coverage; that is, the association pays half their hospital bills.

It is obvious that rates such as these place a heavy "loading" upon the employed subscriber; for an employed person (male or female) requests less hospital care on the average than one not gainfully occupied. The family is the unit of income even if not the unit of hospitalization. Large families require more than small ones, yet the breadwinner can afford less for hospitalization as the family increases. Consequently, any plan which ensures the payment of hospital bills must recognize ability to pay as well as need for service.

* Adapted from *Mod. Hosp.* 51:52-54, Aug. 1938.

The rates for families have been adequate to cover service to families, although the additional charge for the wife may not always cover cost for adult female dependents.

The Committee on Hospital Service has accumulated financial data for all "approved" plans. The total earned income for eighteen plans in operation more than twelve months on December 31, 1937 (not including New York City) was \$3,600,000. Of this total 60 per cent was paid to hospitals for service to subscribers, 21 per cent was used for acquisition and administration, and 19 per cent has been retained for surplus for contingencies. New York City proportions for an equivalent total are about 5 per cent higher for payments to hospitals.

The proportions vary among the plans. During the last six months "loss ratios" have increased but administration and acquisition costs have decreased to a greater degree. These costs now range from 11 to 15 per cent in plans that have been in operation three years or longer.

Special enabling acts for the establishment and operation of nonprofit hospital service associations now provide regulation by the departments of insurance and compel the hospitals to assume direct responsibility to the subscribers. This responsibility is definitely implied in the various enabling acts. In Maryland the provision is incorporated in the law as follows: ". . . each contract . . . obligates . . . each hospital party to render the service to which each subscriber may be entitled under the terms and conditions of the various contracts issued . . . to subscribers to the plan."

Hospitals should not guarantee cash indemnity for expenses at the time of sickness. It is different, however, for a group of publicly supported hospitals to guarantee services upon receipt of a total sum which remunerates them adequately for the care provided. Hospitals can estimate the total amount of care which a group of the population will require and can agree individually and jointly to make contracts to provide this care for a stated amount of money.

Some members of the legal profession and some hospital administrators have argued that because the hospitals make direct contracts to provide service these plans are not a form of insurance. This seems a specious argument. The only fundamental difference between these hospital service plans and the cash indemnity plan is that the risk falls upon the hospital rather than on the stockholder and the intention and ability of the hospital to provide service are substituted for cash benefits.

Hospital people know nothing about the details of insurance in their capacities as hospital executives or trustees. They do, however, understand hospital service and are able to make reasonable estimates of the cost of service to a group of people. It becomes a problem, then, to follow sound advice in estimating the probable amounts of service and the best methods by which subscribers may be enrolled and certified for benefits. The executives of insurance companies, recognizing the nonprofit character and public welfare values of these plans, have been helpful and the executives of existing plans are learning more from day to day.

The nonprofit associations have not sold successfully individual hospital service insur-

ance policies. They have learned from private companies the advantage of group insurance in the matter of collections, the improvement of selection, and the minimization of cancellation. Practically all of the plans at the present time insist upon enrollment through the place of employment, although many of them are now permitting small groups to enroll. The Minnesota plan will accept two persons with a common employer. More recently several of the plans have followed this trend to its logical conclusion and enrolled self-employed or retired persons. Experience indicates that 100 per cent of enrollment among people with a common employer gave equally good selection from small groups and large ones. Experience with self-formed groups, representing employees from different places of business, has been unsatisfactory.

The question has arisen as to whether or not hospitals have assumed an unjustified risk, considering their present dependence upon public support. Logically the hospitals assume no new risk. They already are under legal and moral responsibility to serve all members of the general public. Hospital insurance plans enable many patients to pay bills who otherwise might depend upon charity. A hospital service plan should pay adequately for services received by subscribers. The total revenue to the participating hospitals may exceed that collected directly from the same patients.

Historically, the hospital service plans have paid the hospitals adequately. In some instances the payments have been less than the nominal fee schedules for services received but more than the costs of the services received by subscribers and considerably more than the additional costs of admitting the subscribers as compared with maintaining empty beds.

In cases of epidemics the hospitals incur no more risk than if the plan were not in existence, for epidemics are not limited to policyholders. The effects of epidemics have been greatly overemphasized in the public mind. Six cases of infantile paralysis in a town of 50,000 constitute an epidemic; 25 cases of scarlet fever or 50 cases of influenza preempt the newspaper headlines for several days, but they do not affect greatly the total number of admissions in any metropolitan area during a twelve-month period. Even the influenza epidemic of 1917 and 1918 did not account for more than 10 per cent of the total annual hospital admissions. It would be a large epidemic that would double hospital occupancy beyond its average for sixty days.

I have recommended the accumulation of surpluses equivalent to as much as one-third of a year's hospitalization. A number of plans already have exceeded this average for their enrolled subscribers. In New York City at the present time more than 20 cents of every dollar is being credited to a surplus account for emergencies although the insurance department requires only 4 per cent of the earned premiums to be credited to such account. Recently the board of directors of Associated Hospital Service of New York received approval from the department of insurance for the following allocations of earned income: 75 per cent for hospitalization, 10 per cent for contingency reserves, and 15 per cent for administration, including acquisition.

The tendency for subscribers, doctors, and hospitals to abuse the privileges of the hospi-

tal service association has not been as pronounced as it was feared. The patient has no direct economic incentive for excess hospitalization inasmuch as he must remain under the care of a private physician and all payments are made directly from the association to the hospital.

There appears to be no clash between the economic interests of hospitals and those of stock and mutual insurance companies. Accident and health insurance individual policies appear to be more easily sold in areas where nonprofit associations are successful.

The hospitals of the United States are currently underwritten by the general community. The nonprofit hospital service association is organized to help the sick man pay his hospital bill, not to help the hospital pay its bills. The public must support the hospitals regardless of revenue from private patients. Private insurance companies, therefore, must compete with an industry that already is subsidized by the general community through the provision of tax-free and donated capital as well as the guarantee of support through voluntary contributions and taxation.

The American Hospital Association does not take an antagonistic position toward soundly financed stock or mutual insurance companies. Any soundly financed insurance company has a right to offer cash benefit policies for the costs of sickness. If the private companies can offer more hospital service for less money than the nonprofit service association, the public will gain. The association does, however, warn hospitals and the general public against any affiliation with fly-by-night promoters who are more interested in immediate gain for themselves than ultimate service to their policyholders.

A nonprofit hospital service plan requires the full cooperation of member hospitals. The economic and social interest of hospitals and the nonprofit hospital insurance plans are identical. The plans are in reality the agents of the member hospitals which provide the service, even if the legal status may be defined otherwise. This fact places a responsibility upon the hospital to provide the best possible service under the terms of the contract and upon the management of the plans to give the participating hospitals complete financial and statistical information. Without the active and informed support of the member institutions no plan can develop the maximum confidence among the subscribers and the employers of a community. Hospitals are and should be cooperative rather than competitive institutions. Consequently, there should not be more than one nonprofit service association in the same community or serving the same section of the community.

Hospitals have never been a form of private enterprise similar to factories, department stores, or insurance companies. Hospital care has been provided to the general public regardless of the individual's ability to pay at the time of need. If hospitals had been private enterprises, cash indemnity insurance for hospital bills would have developed under private insurance companies. Hospital care insurance, like hospital care itself, stands midway between private enterprise and social insurance.

A nonprofit association established for public welfare receives public support from the press and other agencies of communication which could not be purchased for large amounts of money. The hospitals continually maintain a reserve through their contractual

arrangements to take care of subscribers, regardless of the ability of the association to pay stated amounts. The absence of competition and the lack of need for paid publicity and advertising would seem to make it possible for the hospitals themselves to provide their services more economically than even the best and most efficiently managed private company.

At the present time more than fifty well-known insurance companies have enrolled their employees in local nonprofit hospital service associations. Some of these companies have available in their own portfolios hospitalization expense contracts for individuals or for groups. Many of them are, of course, selling income protection benefits for people during periods of hospitalized illness.

Nonprofit hospital care insurance is something new. It differs from insurance offered by stock or mutual companies in that legal responsibility for benefits rests upon the hospitals instead of the stockholders or policyholders. Moreover, subscribers to hospital care insurance plans receive service, not cash. No other arrangement would justify public support or participation by publicly supported nonprofit institutions. The enabling acts of the various states have rightly prevented nonprofit hospital service associations from contracting to pay cash benefits to subscribers and have limited them to the provision of "hospital service" or "hospitalization." Administrative efficiency and legal responsibility are thus in accord.

The question as to what benefits may be provided under the category of hospital service or hospitalization has been answered by the customs of each community. In general, the services provided to subscribers through hospital care insurance contracts have been the same as those appearing on the hospital bills of other private patients of the institutions. A patient is primarily interested in receiving the hospital services necessary to adequate diagnosis and treatment. A stated amount of cash may or may not be sufficient to pay his hospital bill for these services.

5. Next in Insurance Plans, *by S. S. Goldwater, M.D.**

It is a matter of rejoicing that the hospital care insurance plan in New York City has grown to the point at which it claims 600,000 members or more. That is a proud achievement and far beyond the expectations of those who gave this plan its first impetus.¹

That so much has been accomplished is due in part to the essential decency and honesty of the plan itself, to the fact that it arrived at an opportune moment, that it filled a long-felt want, that the operation of the plan fell into hands of an able and sincere board of trustees who were seeking nothing for themselves, nothing for their hospitals, and nothing directly for the medical profession, and also that the organization was lucky enough to obtain a brilliant executive in Frank Van Dyk.

The group hospitalization plan locally has undoubtedly prospered. On the other hand, its prosperity has not given me, at least, complete satisfaction. I am in a sense a competitor

* Adapted from *Mod. Hosp.* 50:49-51, Apr. 1938.

¹ As of July 1, 1943, over 1,350,000 individuals were covered by the New York City Blue Cross Hospital Service Insurance plan.—Editors.

of the group hospitalization plan. The plan is serving 600,000 people in New York City. As Commissioner of Hospitals of the City of New York, I represent a much larger plan. Three hundred fifty thousand persons in the city receive hospital care as in-patients each year at the expense of the taxpayers of this city. Assuming that they represent a population ten times as great, the city of New York today has in its hospital service plan for the medically indigent 3,500,000 nondues-paying members.

I am anxious to transfer part of that load to the Associated Hospital Service. The questions are: Can it be done? If so, in what manner? What powers and ideas need to be invoked to put through the expansion plan that I have in mind?

Members of Group A are not eligible for admission to group hospitalization membership because their means are such that they can take care of themselves as individuals. Group B includes the persons of moderate but regular incomes who are not able to meet the excessive and disastrous costs of unexpected illnesses; that group is provided for, at least so far as its costs of hospital care are concerned, in the existing plans in New York and other cities. And then there is Group C, persons in this trying world still happily blessed with employment of some sort but with incomes so low that they and their families cannot subscribe to the present group hospitalization scheme and meet in addition the cost of professional service that is a necessary incidental, but is not covered in the plan itself. Finally, there is Group D, the medically indigent group, which includes today 3,500,000 persons or more in the city of New York, but which also takes in many who might under happier circumstances be transferred to Group C.

I am particularly concerned with two possibilities: (1) rounding out so that it shall do its full job, that which is now being done to a limited extent for Group B, and (2) giving the benefits which Group B persons now receive through group hospitalization to a considerable number of persons in Group C. The latter group is not joining the hospital plan in New York today because the plan is honestly represented to them. They know that even if they are able to pay the fee which is charged for membership, they will not be in a position to pay for a surgical operation when it is required. Occasionally an individual, knowing that he will not have such means, does join the plan and in those rare instances medical men are asked to contribute their services. Happily so far they have shown a generous disposition to do so.

But the large number of persons who fall in Group C need to be organized in such a way that they can take care of themselves and be shifted from the class of reluctant medical indigents to the class of self-respecting medically insured persons, at least as far as hospital care is concerned. I shall never be happy until that is done. There are at least a million people in New York City that in their hearts today hope that it will be made possible for them to join such a plan to remove themselves once and for all from the group of medical indigents.

If that is done means have to be provided for it. It would be foolish to dogmatize on the subject, but in order that we may think of a possible plan in concrete terms it is necessary to hazard some guesses as to costs and means. That I now propose to do.

I assume at the outset that the group of which I speak, persons who are employed but whose incomes are not sufficient to enable them to get the benefits of the existing plan, numbers at least a million people in the city of New York today. I know, as a matter of fact, that a large number of that group are most reluctant to enter the city hospitals as charges upon the community. I know that a considerable number of them are unwilling to enter the free public wards of voluntary hospitals because they don't like what they regard as the "taint of charity," and yet it does not lie within their means as individuals, having formed no group, having no collective resources, having no means of budgeting the costs of hospital care, to remove themselves as individuals from the medically indigent class. If I am right in assuming that that group could pay for hospital care combined with medical care approximately what is now being paid by the Group B class for hospital care alone, namely, \$10 a year, then some means must be found by which that inclusive service could be rendered at such a cost.

Obviously, if out of that cost we have to find a hospital maintenance fee and a medical service fee, sacrifices have to be made. Let us assume that out of the money that this group would pay in after deducting expenses and reserves, there would be approximately \$7 a day available for the cost of hospital plus medical care during the periods of disastrous illness that require hospital care. We are now in a position to calculate on an actuarial basis. In order to make this plan a success, that fee must be divided between the hospitals and the medical men. If the available fee is to be divided, then the part that goes to hospitals in the city of New York, at any rate, would be considerably less than the actual cost of caring for such patients in first-class voluntary hospitals. It then is necessary to introduce in some way, either directly or indirectly, a contributed sum over and above that which is paid into the plan by the proposed insured person himself.

How is that supplementary money to be obtained? Is there any reasonable ground for supposing that the tens of thousands of individuals who contribute toward voluntary hospitals today will increase their contributions sufficiently to bear this cost? The supposition is questionable. Yet the cost must be met.

I can see no reason why an honest, earnest and continuous appeal should not be made to generous-minded well-to-do individuals in the city to contribute toward such a service. If it is legitimate, if it is humane, if it is effective to contribute the whole cost of hospital care to those who need to be supported to that extent, it would be equally generous, more far-sighted, and perfectly consistent and proper for the donor class to contribute in part toward the support of dues-paying members of Class C and thus to remove them from the temptation and need of seeking 100 per cent charitable relief. It is not inconceivable, although without American precedent, that the taxpayers may interest themselves in this matter and that eventually subsidies may be provided out of the tax fund.

If, as we in New York assume, no man, woman, or child is to be permitted to suffer from the lack of medical care because of poverty or slender means, surely it would be relatively advantageous to the taxpayers to pay part rather than the whole cost of hospital care of a group that cannot care for itself single-handed.

Obviously, if the million persons we are considering are removed from the medically indigent class to the partially self-supporting class under a group hospitalization scheme, then at least \$7,000,000 will be provided by the sick themselves and this \$7,000,000 is part and parcel of the \$35,000,000 which taxpayers are today contributing toward the care of the sick poor in the city of New York.

The interest of doctors in this matter is considerable. I have suggested that contributions toward the consummation of such a plan might be made by voluntary donors. I have suggested that taxpayers would actually profit by contributing a share. I hope that medical men will contribute also. I can see no justification, if a system of this sort is set up, for demanding that the services of the medical profession be contributed on a wholly gratuitous basis. Medical fees should be paid. The fees will have to be pared down to meet the requirements of this special intermediate class. If assistance is obtained from the voluntary contributors of funds, I believe that the plan would be equally successful in obtaining the cooperation of the medical profession in the form of substantially reduced fees. The scheme would be profitable to the medical profession because most of the patients in the group of which I speak are paying no medical fees at all when they are admitted to hospitals today.

As a somewhat troubled hospital commissioner commanding nearly 20,000 hospital beds today, needing a great many more, and feeling pressure upon the free city hospital services increase month by month and almost hour by hour, I will admit that a load of responsibility and anxiety would be removed from my mind if such a plan could be put through within a reasonable space of time. It would shift from a large public hospital organization to voluntary hospitals a part of the almost impossible load that the public hospitals are today called upon to bear. That shift would engender a feeling of independence and self-respect in the minds of these persons thus freed from the unhappy state of medical indigence. They would be transferred from huge public hospitals to smaller voluntary hospitals where it is possible to conduct services more humanely. They would enter the voluntary hospitals as private or semiprivate patients and not as public charges and their spirits would rise accordingly.

Most of the physicians in this country are eager to see many features of medical practice preserved as they exist today. I respectfully submit that one way of maintaining medical practice is to develop such a plan as this. I would like to see a large segment of medical practice now belonging to public or state medical service transferred back to private hands. The government has, of course, its proper function in caring for the indigent. But when government agencies dealing with individuals, performing service of a highly individual kind as medical service, reach a certain point in their development, they become unwieldy and unmanageable. I am one of those who are wrestling with the problem of managing satisfactorily a huge public service today.

When we made our first approaches to the medical profession in New York and asked for its sanction of a group hospitalization plan without medical service, there were many physicians who were reluctant even to go so far. But after careful analysis they saw that what was proposed would be a service to the sick, a service to the hospitals, a service to the

community, and a service to the members of the medical profession themselves. And so it has proved.

In making this further appeal for their cooperation on a wider plane, I do so with the complete confidence that if the medical profession will join hands with the unselfish voluntary hospitals of the city, this plan can be put through and made a success. We are in a fair way to accomplish this. Already the first approaches have been made and a joint committee exists today which is studying this problem from every angle in the interest of the city. Nothing has touched me so much as the unselfish spirit of the spokesmen of organized medicine, the feeling and understanding they have displayed.

The organization of such a service is inevitable. If it is too long delayed through inaction and indifference on the part of the voluntary hospitals, the contributing members of the community, those interested in welfare movements, and the medical profession itself, it is possible that profit-making agencies seeking selfish advantages may take the initiative in this movement. The right and duty of taking the initiative belong to the medical profession, to the social workers, to the supporters and trustees of the voluntary hospitals.

I ask those who have to do with the development of group hospitalization to charge themselves with responsibility for seeing that the service is eventually extended in two ways: (1) by adding medical service to hospital service in the plans that now exist, in a manner consistent with medical ethics and having the sanction of the medical profession, and (2) by establishing in appropriate ways a ward service plan including both hospital and medical service in every substantial community in the country. All of those who are eager to see private medical practice and voluntary effort in the field of organized medical service preserved and extended owe it to themselves and to their principles to throw themselves heartily into this movement.

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CHAPTER XXIX. PUBLIC HEALTH

1. The General Hospital and Public Health, by *W. S. Rankin, M.D.**

A PROPER understanding of the relation of the general hospital to the problem of public health is conditioned upon an understanding of the present status of that problem; moreover, the present condition of the problem of public health can be fully appreciated only in the light of recent history. In 1890, for every 100,000 of the population there were 1960 deaths during the year. In 1932, there were 1090 deaths per 100,000 population, a 44 per cent reduction in a period of 42 years. While in 1932 we had in the United States approximately 1,300,000 deaths, we would have had with the death rate that prevailed 42 years before, in 1890, 2,400,000 deaths. That is to say, the reduction in the death rate between 1890 and 1932 was equivalent to the saving of 1,100,000 lives a year.

Now to understand the methods by which this great reduction in the death rate, this wholesale life-saving process, was carried on, we must appreciate the fact that, generally speaking, there are in the main two great groups of diseases: (1) those due to causes that are introduced from without, external causes, and (2) those due to causes arising from within, internal causes. The first group are the germ or infectious diseases. The second group are diseases that result from internal conditions, hereditary weaknesses, and personal habits.

The 44 per cent reduction in the general death rate achieved during the last 42 years has been the result of a successful warfare against the diseases of external causation, the germ diseases. The germs were destroyed before gaining entrance to the body in the purification of water supplies; in the sanitary control of milk supplies; in the destruction of insect carriers, the mosquito, the fly, the flea, the louse; in limiting infectious contacts through isolation and quarantine. Moreover, the germs that eluded destruction on the outside and gained entrance to the body were rendered harmless within the body through the use of vaccines, antitoxin, and immune sera. As a result, the death rates of the germ or infectious diseases, diseases due to external causes, have undergone tremendous reductions in the 42-year period. Tuberculosis has declined from a death rate of 265 to 63; typhoid fever from a death rate of 46 to 4; the common contagions, measles, whooping cough, and scarlet fever, from a combined death rate of 43 to 8; diphtheria from a death rate of 97 to 5; diarrhea and enteritis, summer complaint of children, from a death rate of 133 to 16; infant mortality from 162 deaths per 1000 births in 1908 to 65. The total death rate from the above list of diseases was approximately 740 deaths per 100,000 population in 1890, and in 1932 it was 160 deaths per 100,000 population, a reduction of 78 per cent.

The diseases of external causation now cause about 20 per cent of the general death rate. The diseases of internal origin, personal habits, and hereditary weaknesses cause 80

* Adapted from *Hospitals* 10:9-14, Dec. 1936.

per cent of the general death rate. Heart disease, cancer, apoplexy, and nephritis alone caused 598 of the 1090 per 100,000 population, that is, 55 per cent of the general death rate. Now this situation leads to the inescapable conclusion that any further marked reduction in the death rate and any appreciable lengthening of the span of life must be brought about through methods of treatment that are concerned more with diseases of internal origin than with those of external origin. The diseases which are now and which in the future will play major roles in the general death rate are those where individual factors as distinguished from common factors are involved, those of a personal character which call for individual treatment.

Individual treatment is essentially a problem of medical service. If the present low death rate is to be retained, if it is to be further reduced, if the span of life is to be lengthened, medical services concerned with the internal causes of disease, with the personal factors, must be improved. In any consideration of medical services the tremendously important part played by the general hospital is a matter of primary consideration.

The major contributions of the general hospitals to medical services are two-fold: (1) a *professional* contribution which provides for the treatment of a large proportion of serious illnesses; during the present year 7,000,000 of our national population will have passed through our general hospitals as in-patients; (2) an *educational* contribution (a) in the higher conception of medical services given to the 7,000,000 in-patients that pass through the general hospitals annually, (b) through the training of nurses, (c) through the training of interns and residents, (d) through the postgraduate training of members of the staff in the opportunities afforded for discussions and interchange of professional experiences, and (e) through the facilities, especially in the larger university hospitals, for scientific research. If we could possibly conceive of the full meaning of the work and influence of the general hospitals on medical services, and, through its contributions to medical services, the effect on the general death rate, on increasing the span of life, then we would realize more clearly than we do the large and essential relation of the general hospital to the problem of public health.

While the contribution of the general hospital through improved medical service is great, there is an economic limitation to this contribution which should be recognized and removed as soon as possible. A brief examination of the several items which enter into the cost of medical care will bring this point into clear focus. According to the Committee on the Costs of Medical Care the people of the United States spent, in 1929, \$3,656,000,000 for medical services. Four of the 13 items into which the Committee divided the total bill account for 78 per cent of the total cost. These four items, then, are the important items, far more important than the other nine. These four items are: (1) the sum paid to private physicians, \$1,090,000,000; (2) the sum paid for drugs, \$665,000,000; (3) the sum paid to dentists, \$445,000,000; and (4) the sum paid to hospitals, \$656,000,000. The relative importance of these four major items does not depend so much on the relative size of the sums as it does upon the distribution of these sums within the general population—in short, not upon the total bill but on the average cost per user. More than 100,000,000

people, 90 per cent of the population, paid the drug bill of \$665,000,000. That was an average cost per user of \$6.65. The \$1,090,000,000 paid private physicians was paid by 50 per cent of the population, 60,000,000 people, an average cost per user of \$18. The dental bill of \$445,000,000 was paid by 20 per cent of the population, that is by 24,000,000 people, an average cost per user of \$18. Now take note: The hospital bill, \$656,000,000, was paid by only 5 per cent of the population, 6,000,000 people, an average cost per user of \$105. A more even distribution of the \$6.65 per user paid for drugs is not a matter of any great importance. A more even distribution of the \$18 per user paid physicians and the \$18 per user paid dentists is not a matter, relatively speaking, of any great social importance. But the unpredictable, unbudgetable, heavy hospital cost per user, \$105, is a heavy expense that seriously interferes with the full contribution of the hospital to more adequate medical services, and, through better medical services, to the problem of public health.

That hospital care is inadequate, that the contribution of hospitals to medical services is more limited for a larger proportion of our population than it should be, I again call to witness the Committee on the Costs of Medical Care. The Committee found that, in 1928, 60 per cent of the population of the United States had incomes of from \$1200 to \$3000 per year, and, for this large proportion of the national population, hospital care was only 48 to 55 per cent adequate.

The economic problem as I have undertaken to point it out is more directly concerned with hospital service than with any other phase of medical service, and it is for this reason that some plan for distributing the cost of hospital care over larger population groups is necessary. Fortunately the group prepayment plan is now well planted in various sections of the United States. It is the duty of all of us to render every assistance and encouragement to the sound and rapid development of the prepayment principle which distributes the more difficult item in the cost of medical care, the hospital bill, over greater periods of time and larger population groups. When this is accomplished and the contribution of hospitals to medical service made more adequate, hospitals will begin to play a far more effective role in the problem of public health than at present.

In addition to the relation of general hospitals to an adequate and effective medical service, and through such service to the problem of public health, the small general hospital, located as a rule in the more rural communities, communities with towns of from 2000 to 15,000 people, has an important *special* relation to improvements in medical service. The small hospital in rural sections improves medical services in two ways: (1) it brings about a better distribution of physicians, quantitatively and qualitatively; (2) it makes available to the people of rural communities a larger proportion of the services of the better qualified local physicians.

The distribution of physicians in the United States is very uneven. According to the last census of the American Medical Association there is in the United States one physician for 786 people; in Colorado, there is one physician for 565 people; in Mississippi one for 1352 people. The cities of the country are congested with doctors; the rural sections depleted. In cities of 100,000 population and over there is approximately one physician for 500 people.

In a large proportion of rural counties of the United States there are 2000 people for every physician and in many counties 3000 or more for every physician. In both respects the situation is abnormal. Too many physicians means such a subdivision of practice as to result in lowered, and in many cases inadequate, incomes, and this in turn introduces a spirit of commercialism in practice, encouraging high fees, excessive references, and unprofessional understandings. Too few physicians means, of course, an inadequate medical service.

One of the major factors in this uneven distribution of medical services lies in the presence or absence of hospital facilities. The younger generation of physicians, men who have had their training during the last ten or even twenty years, have been taught and encouraged to aspire to a type of practice which makes them dependent upon hospital facilities if they are to achieve in any degree their professional ideals. These younger physicians with more modern training select urban locations where they can have access to hospitals, and avoid rural locations where modern equipment for the practice of medicine is not available. This statement finds its support in the fact that while only 10 per cent of the physicians in the United States have practiced for a period of 35 years, in many rural communities 30, 40, or even 50 per cent of the physicians in practice have professional careers of 35 years and upwards. Hence the congestion of the cities with physicians and the depletion of the rural areas.

Improved hospital facilities in rural communities, that is in towns of from 2000 to 15,000 people located in counties of from 30,000 to 40,000 people, will bring about a more even distribution of physicians than exists under present conditions. The establishment of rural hospitals opens to the younger graduates of medicine opportunities to practice their profession in harmony with their teaching, their hospital training, and their professional ideals, and, in drawing these younger physicians with more modern training into rural areas, tends to relieve the urban populations of their professional congestion and makes available to the rural populations both an increased quantity and a greatly improved quality of medical service.

The hospital enables the better trained, abler type of physician to double and treble and quadruple the service that he would be able to render a rural community without a hospital. In most rural communities there is a demand for the services of from 20 to 30 per cent of the profession engaged in the practice of medicine that completely utilizes their time. As a rule these are the abler members of the profession, the men with more recent training, the men who keep up with medical literature and attend the meetings of their local and state medical societies. These men are unable to reach a larger percentage of the population that would use them because of the physical limitations under which they practice, a large proportion of their time being consumed in travel and in performing the details of practice that would be cared for by nurses, technicians, and laboratory workers in a hospital. With a local hospital this smaller, more efficient element of the profession can bring the more seriously ill into the institutions where, with the assistance of nurses and technicians, they can care for from three to four times the number of patients that they could reach

without a hospital. And so the hospital improves the quantity and quality of medical service not only by the number and type of physicians that it attracts to the community, but by extending the professional reach of the 30 or 40 per cent more skilled and progressive physicians. In this way the rural type of general hospital is related to the problem of public health in a way that calls for constant emphasis.

For nine years, since 1927, the American Hospital Association has had a committee to study cooperative problems, that is, problems of mutual interest between local health departments and hospitals. The committee began its work early in 1927 by inquiring into existing cooperative practices. A questionnaire was sent to 247 city health departments and 1300 hospitals. Fifty-five per cent of the health departments and 30 per cent of the hospitals replied. It was found that cooperative relations of one sort or another existed in 60 per cent of the cities; that in 48 per cent of the cities there was cooperation between the hospitals and the health departments in laboratory services; that in 35 per cent there were cooperative arrangements in the work of clinics; that in 23 per cent there were cooperative arrangements in communicable disease control. From the committee's studies it appears that under favorable local conditions there are certain distinctive advantages in cooperative arrangements between health departments and hospitals in dealing with at least four problems of mutual interest, namely, (1) laboratory services, (2) the development of clinics, (3) communicable disease control, and (4) social services.

The most favorable local conditions for cooperative laboratory services between health departments and hospitals exist in those places where there is a single hospital and a full-time health department. Such conditions are usually found in the more rural sections. Under these conditions a laboratory that serves both the hospital and the health department may be better financed, managed by better trained personnel, and better equipped if supported by both agencies. The argument for both efficiency and economy suggests such an arrangement wherever it can be worked out. Unfavorable conditions for such a cooperative arrangement exist where such cooperation is not nearly so necessary, namely, in large cities with large health departments and large hospitals. The arrangement in such places should be, perhaps, as it is in the majority of such cases, not in the centralization of personnel, equipment, and management, but in a differentiation of services: the health department in its laboratory handling those laboratory problems that are more directly concerned with the prevention of disease, such as water and milk examinations, the examination of sputa and secretions for bacteria such as tuberculosis, diphtheria, and typhoid, and the making of such diagnostic tests of blood as for typhoid and syphilis; the hospitals in their laboratory work restricting themselves more especially to the work of the clinical laboratory, blood examinations, examinations of urine, gastric content, excreta, and the pathological examination of tissues.

Where it is possible to deal with laboratory services of health department and hospital as a common interest, the laboratory should be located in the hospital for several reasons: (1) the hospital needs more prompt reports upon laboratory tests than the health department and a closer connection between hospital and laboratory is more necessary than the

connection between health department and hospital; (2) the laboratory in the hospital comes under the professional supervision of the staff, which supervision is either absent or not so effective if the laboratory is not located in the hospital.

The Committee on Public Health Relations in its report last year to the American Hospital Association with respect to cooperative clinics said:

The proper conduct of various types of clinics, prenatal, infant, pre-school, eye, ear, nose and throat, dental, orthopedic, tuberculosis, venereal disease, cancer, mental hygiene, cardiac, and periodic health examinations, is a matter of common interest to hospitals, health departments, and certain voluntary health agencies. Such clinics, when properly handled, require an understanding and sympathetic cooperation between the interested agencies. It seems to be generally agreed that these various clinics should be located in a hospital for three reasons: (1) the better diagnostic facilities of the hospital; (2) the interest, influence, responsibility, and supervision of a medical staff in the observance of reasonably good professional standards; and (3) many clinical patients will be found in need of the professional care that is provided either through the in-patient or out-patient service of the hospital.

As the old fear of air-borne infection continues to lessen its grip on the professional and lay mind and the importance of contact infection is more fully appreciated, we are likely to develop fewer isolation hospitals even in the large centers of population and to provide for the treatment of communicable diseases in general hospitals, where their communicability will be minimized or eliminated by improved technical handling.

Regarding social services, again I quote directly from the report of the Committee on Public Health Relations:

The importance of social service to hospitals and to clinics in which health departments are interested in determining eligibility of patients for free or part free service, for follow-up work, and for adjustment of social problems having a direct bearing upon the treatment of patients is generally recognized. In large hospitals and in any large clinic program, especially those involving the treatment of cancer, tuberculosis, venereal disease, and mental conditions, social services are in most instances provided. Cooperative understandings and arrangements promote both efficiency and economy. In small communities where limited budgets of small institutions and small health departments seriously interfere with well-balanced social service programs, the opportunities and necessity for cooperation among the interested agencies are greatest. The cost of maintaining cooperative social service programs should be borne in proportion to the interest served, influenced naturally by the available funds of the health departments, voluntary agencies, and hospitals.

The recognition of problems of mutual interest to hospitals, health departments, and voluntary health agencies, and the proper coordination of these interests in laboratory services, clinics, communicable disease control, and social services, will depend upon the setting up of a coordinating agency. In small rural settlements such an agency might rep-

represent the county and the town authorities, the health department, the hospital, any important voluntary health agency, and the organized medical profession. In larger urban centers the organization of such an agency will represent the health department, the voluntary hospitals, and voluntary health agencies. The hospital council idea which the American Hospital Association has been emphasizing during recent years could be and should be slightly enlarged and used to effect the necessary coordination of forces.

2. Voluntary Hospitals and the National Health Program, *by Joseph W. Mountin, M.D.**

DURING three days of July 1938 a group of approximately 200 persons representing the interests of various elements in our national life met at Washington to hear and consider a series of proposals for improving the general level of health of the American people. These proposals, five in number, were formulated by the Technical Committee on Medical Care, operating under the auspices of the Interdepartmental Committee to Coordinate Health and Welfare Activities. The assembly to which reference is made is commonly spoken of as the National Health Conference, and the five recommendations of the Technical Committee on Medical Care constitute the so-called National Health Program. The proposed program follows in general the administrative pattern of the Social Security Act in that each state will determine and operate the service for its citizens, while the Federal Government is to render technical advice and, by means of variable grants in financial aid, will smooth out some of the differences in opportunities for health that now exist among the several states.

Recommendation I of the Technical Committee is designed to strengthen the basic health organization as exemplified in state and local health departments. In addition to discharging their regular functions more effectively than is possible under present circumstances, these departments will be enabled to carry out enlarged programs for maternal and child health. Special provisions also are made for industrial hygiene and mental health, and for particular categories of preventable morbidity and mortality, including cancer, tuberculosis, pneumonia, malaria, and the venereal diseases. Assistance with the construction of hospitals and health centers is provided under Recommendation II. Recommendation III covers medical care for needy persons; while under Recommendation IV are contemplated programs of medical care that include persons above the subsistence level. Insurance against wage loss due to temporary disability is the purpose of Recommendation V. Persons concerned with hospitals have a particular interest in the first four of these proposals. While grants for construction and for the support of added hospital facilities during the first three years of their operation are specifically set forth in the second proposal, payment for care of patients through the use of existing institutions is implied in proposals I, III, and IV.

The program as a whole makes provision for added public facilities and for further uti-

* Adapted from *Hospitals* 13:24-30, Apr. 1939.

lization of governmental and nongovernmental hospitals in the three medical types, general, tuberculosis, and mental; but on this occasion discussion will be limited to general hospitals. This element of the program has been chosen for presentation because of its more immediate interest and in order that the paper may be held within reasonable limits. Also a valid reason for exclusion of other medical types is the fact that in comparison with the total value of tuberculosis hospitals, the investment of voluntary agencies is relatively small; in mental institutions the proportionate investment by voluntary agencies is even less. On the other hand religious bodies, nonprofit corporations, and proprietary interests operate over 80 per cent of general hospitals registered by the American Medical Association; these hospitals contain about 65 per cent of the beds and furnish about 60 per cent of the days of care reported by general hospitals in the registered group. By the nature of their geographic distribution, voluntary hospitals occupy a very strategic position. Among the 1737 counties which in 1938 reported the presence of local registered hospitals, 519 listed only proprietary institutions; 786 were served by nonprofit hospitals alone or in conjunction with those proprietorially owned; while only 432 counties contained tax-supported facilities.¹

Another measure of importance is the value of plant assets represented in voluntary hospitals; this is estimated at \$1,483,000,000 or about 70 per cent of the total for all general hospitals. Over and above these values that are expressed in actual buildings, grounds, and equipment, this group of institutions possesses endowments somewhere approaching a half billion dollars. Obviously any national health program that includes medical care must, if for no other reasons than efficiency and economy, make some provision for utilizing a going organization of such magnitude and ramification. Furthermore, nonprofit and proprietary hospitals afford the only facilities available in many communities, especially those removed from centers of population. Another value to be conserved is the high standards of service that characterize hospitals of this country; this may be attributed in very large part to the ideals and the freedom of action peculiar to the better hospitals in the voluntary group. It is well to caution, however, that for many persons the term voluntary hospital is likely to suggest some large endowed institution affiliated with a center of medical education, or a less prominent though perhaps equally efficient plant sponsored by some nonprofit lay group or religious body. Such hospital gems are usually found in population centers; and these, even when grouped with others of slightly lower standard, furnish accommodations that are accessible only in limited sections of the country. A point worthy of special emphasis is that beyond effective demand, whether expressed by patients admitted or days of care, there is a vast quantity of unmet need which cannot be ignored in any national health program worthy of the name. The question at issue, therefore, is not whether voluntary hospitals can be utilized in a national health program; rather

¹ In this connection and throughout the paper, when hospital accommodations are computed in relation to states or local areas, federal hospitals have been deducted from the gross totals since such hospitals are maintained for designated beneficiaries and therefore are not generally available to the population of their respective localities.

it is how and where their resources must be supplemented in order that the needs of various groups and classes of the population may be satisfied in reasonable measure.

In planning for the future the first step is to take an account of present assets and deficiencies; especially the latter must be brought into focus since this is the area in which remedial measures must be applied. It is necessary also to have a clear notion of the purposes which hospitals may be expected to serve. First among these functions one might list the traditional one of rendering bed care for the sick; but the system of community facilities should supply such services as are needed by all social and economic groups of the population. The superior equipment commonly associated with hospitals should be available under appropriate terms to all qualified physicians, and to health agencies, both public and private, for the diagnosis and treatment of ambulatory as well as bed patients. Finally the hospital is deficient in a very important respect if it fails to act as a leavening influence on local medical practice; this may be accomplished through staff education and staff discipline, and through opportunities afforded for refined diagnosis and therapy.

No doubt there are some who wonder at the awakening interest of the Federal Government in community hospitals, and especially they question the necessity for new construction. Their rather quizzical attitude arises very largely from the fact that two terms, *adequacy* and *use*, are interpreted in the light of present effective demand rather than actual need for hospital accommodations. Reasoning from this premise may, and often does, lead to such absurd conclusions as these: Communities are without hospitals because such facilities are not needed; hospital beds are empty because there are no patients to occupy them. Obviously the amount and character of illness should be the criteria used in estimating need for different types of care. A slight variable affecting need for hospitalization is introduced by circumstances within the home. It is, however, a well-known fact that the poor suffer more illness than do persons in better economic positions; and correspondingly that homes of the poor are less adapted to types of care commonly associated with hospital service. The pattern of family life in villages and rural areas may be somewhat better suited to home care of the sick than it is in the large urban centers; but this advantage is offset in great measure by lower family income, deficiency in household equipment, and mileage charges which must be added to physicians' fees. While there may be no essential difference between urban and rural people in their needs for hospital service, the tendency of especially well-qualified physicians to settle in centers of population influences people from the villages and the rural areas to seek hospital care in the larger cities. As local facilities improve in quality and availability, physicians with special training are attracted to cities of the medium and lower population brackets; thus differences in hospitalization rates between communities of various sizes tend to become less apparent. Under the present dispensation, however, some rather striking contrasts are revealed when the existence and use of facilities are displayed against a common background of need.

In all there are approximately 6200 places of general service category where sick persons may obtain overnight bed care. Between 1200 and 1500 of these institutions fail to meet the

requirements for registration laid down by the American Medical Association. Aside from the relatively few that do not desire registration, this group of unregistered hospitals may be considered substandard; at best their usefulness is very much limited, and for practical purposes they may be passed over in this discussion of accommodations available in general service hospitals. The registered general hospitals proper contain in all about 460,000 beds; these if related to the population give an average of 3.6 per 1000 for the country as a whole.

The aforementioned general averages mask wide variation in amounts of facilities that are available to the citizens of individual states. At the upper end of the scale are two states having between 5 and 6 beds per 1000 population. In striking contrast are ten states that report less than 2 beds for the same number of people. Between these extremes is one group of twelve states having from 2 to 3 beds per 1000 persons; sixteen states afford between 3 and 4 beds per 1000 persons; and there is another group of nine states where the ratios range between 4 and 5. By disregarding state lines and analyzing the situation from the standpoint of distribution of hospitals according to types of communities, one finds location of hospitals to be associated with areas that represent aggregations of wealth and people. In the 182 counties, where all or more than half the population resided in areas classed as metropolitan in 1930 by the United States Census Bureau, the ratio of beds per 1000 inhabitants exceeds 4.5. If to these 182 counties were added the tier of counties immediately adjoining, the ratio would still be high, 4.0. Beyond this zone the proportion of facilities to potential patients falls very rapidly. In the United States as a whole slightly more than 1300 counties are without a registered general hospital. The absence of a hospital does not, for many counties, express a deficiency since satisfactory accommodations may be found within reasonable distance. It is a fact, however, that some 18,000,000 people live in counties without a registered hospital.

The situation just described also may be portrayed on the basis of so-called hospital service areas. This method is particularly applicable for sections where county lines have relatively little true significance. By using as the center a county having 250 or more hospital beds and calculating the facilities in surrounding zones as described by radii of increasing length, the picture is one of progressive decrease in facilities proportionate to the population as the circles grow larger. Perhaps the institutionally minded hospital administrator will say, "The situation you describe is as it should be." To this rejoinder the obvious reply is: If the hospital is to be no more than a place to house patients and equipment for physicians of the immediate vicinity, then location is a matter of little moment, assuming of course that the local profession is sufficiently skilled to man the institution. On the other hand if the hospital is to serve, in a broad sense, the purposes of a health center and as an adjunct to local medical practice, any institution more than 25 miles from its potential beneficiaries is of decreasing value in relation to this concept.

As previously stated, champions of the status quo when extolling the superiority of American hospitals are likely to have in mind the monumental type of institution erected perhaps to the memory of a philanthropist, or some tax-supported medical center associated

with a university. Relatively few people realize that 25 per cent of all registered hospitals contain less than 25 beds each. Roughly, another 25 per cent contain between 25 and 50 beds, while only 16 per cent of the hospitals have a bed capacity in excess of 150. With respect to units of less than 25 beds, many students of administration will agree that, for economical operation and good hospital practice, hospitals of such small size should be limited in scope of service and be tributary to some sponsoring institution. Moreover, these small hospitals seldom operate ambulances, very few have clinical laboratories under competent direction, and, surprising as it may seem, a considerable proportion are reported as being without x-ray equipment.

During 1937 the admission rate to general hospitals was 66 per 1000 persons in the total population. For people of the metropolitan counties it was 91. If the first tier counties be added to those of the metropolitan group, the rate still remains high, 81. In the counties beyond, which are largely rural, the rate falls to 44. Since the areas used for this comparison are broad and contain diversified populations, such differences in admission rates as those cited can hardly be explained on the basis of residence. Percentage of births occurring in hospitals is sometimes used in preference to total hospital admissions as a measure of social consciousness since hospitalized deliveries may be used to represent an elective measure in medical service, while general hospital admissions more often express care that contains a very large emergency element. On this count Hoge² found that in 1937 about 44 per cent of all births registered in the United States took place in hospitals, whereas in the sample counties, selected on the basis of being 50 miles or more from any important hospital center, only about 17 per cent of births occurred in hospitals.

Paradoxical as it may seem at first glance, where facilities are fewest they are used the least. In metropolitan and contiguous counties utilization may be expressed as 73 per cent of available bed days; while in those primarily rural, occupancy falls to 60 per cent. When utilization of beds is shown by hospital control, the governmental facilities are, as a rule, used to optimum capacity; in contradistinction those of proprietary ownership show utilization which falls below 50 per cent of the available bed days; while an intermediate position, as expressed by average occupancy of about 60 per cent, is held by the nonprofit group of hospitals.

Willingness of patients to avail themselves of hospital facilities has been suggested as a reason for the well-known difference in the use of hospitals by urban and rural groups. This supposition, however, is not borne out by inspection of their respective expenditures. According to Klem,³ families having incomes of \$3000 and above when classified according to place of residence as metropolitan communities, small cities, and villages, report average annual expenditures for hospital care as \$13.60, \$14.50, and \$22.50, respectively. The metropolitan families receiving annual incomes within ranges of from \$500 to \$749, and from \$750 to \$999 pay annually for hospitalization \$1.05 and \$2.55; for the small cities the corresponding expenditures are \$4.05 and \$7.86; while expenditures for hospitalization

² Vane M. Hoge, Rural hospital needs, *Hospitals*, Nov. 1938.

³ Margaret C. Klem, Family outlay for hospital care, *Mod. Hosp.*, Feb. 1939.

by village families in the two economic groups are \$4.09 and \$5.32. In the intermediate income classes payments by metropolitan families are somewhat higher than those of small city and village families.

More important than location or size of a hospital, or even the out-of-pocket expenditures of families, in determining the use of hospital facilities is the supporting financial structure of the hospital. This factor fixes in very great measure the extent to which beds can be placed at the disposal of different groups of the population. Especially is this influence apparent in hospitalization rates reported by the underprivileged groups. On this point an analysis of hospital receipts shows that fees collected directly from patients furnish 70 per cent of the income for nonprofit hospitals, and for the proprietary group more than 90 per cent. Endowments produce about 6 per cent of the revenue for nonprofit hospitals, and those under such control obtain in gifts an amount of perhaps the same magnitude, but receipts from these sources are negligible for the proprietary group. If the total receipts of all hospitals, other than those of the Federal Government, may be taken to represent outlay for local hospital service, the distribution by source becomes 62 per cent from patients, 24 per cent from taxation, and 14 per cent from other channels. This situation varies of course among the individual states and between broad geographic divisions of the country. In eight states patients contribute more than 80 per cent of hospital income, and in twenty-seven states patients furnish more than two-thirds. The patient's share falls below 50 per cent in only two states. These figures on source of hospital income must be considered in connection with the fact that about one-third of the population for the United States falls into either the indigent or the marginal group. When given care in the northeastern and western states, patients contribute a proportionately smaller part of hospital income than they do in either the central or the southern states. One-third of the difference between patient fees and total cost of care is borne in the eastern states by endowment and gift funds, while two-thirds is supplied through taxation. The western states make up the difference almost wholly by taxation. Reports from hospitals situated in metropolitan counties and the counties immediately adjoining disclose receipts from all sources that are equivalent to \$4.58 per capita when distributed over the entire population; of this the patient pays \$2.60. In the second tier counties and those beyond, hospitals obtain what amounts to \$1.62 per capita, \$1.24 of which is obtained in the form of patients' fees.

Early in this paper mention was made of the second purpose usually assigned to the hospital, that of providing diagnostic and treatment facilities which may be used alike by practicing physicians and public health agencies. A hospital operating under appropriate arrangements with local practicing physicians and health agencies, according to this plan, would make its x-ray, laboratory, and other equipment available to ambulatory as well as bed patients. Usually some scheme for rendering out-patient service would be entailed although it need not always be a formal department type of organization. The necessity for pooling resources exists especially in the smaller communities; otherwise both the consumer and the producer may be denied facilities required for efficient and effective service.

Unfortunately the performance to date would indicate that the hospital occupying the role of a health center is very largely a theoretical consideration, and that many hospitals are not likely to develop this feature beyond the hypothetical stage, although an ultimate consummation of the larger purpose is conceded to be highly desirable. Furthermore, most of the steps accomplished in this direction have been taken by the tax-supported and by the endowed hospitals. For example, some 770 hospital out-patient departments were enumerated in a study conducted by the United States Public Health Service in collaboration with the Out-Patient Committee of the American Hospital Association, and practically all of these are located in cities having more than 100,000 population.

Out-patient departments sponsored by nonprofit hospitals are more numerous and render a greater volume of service than those sponsored by state and local governments; but in relation to their numbers, performance of the government-sponsored facilities is higher whether this performance be based on the proportion of hospitals having out-patient departments or on the number of patient visits per department. The few organizations for out-patient service found in smaller cities are usually attached to university hospitals. To the service rendered by organized out-patient departments should be added an indeterminate but significant amount rendered to ambulatory patients by many hospitals under less formal arrangement. A large percentage of this unorganized service for ambulatory cases appears to rise out of the accident work and postoperative dressings.

In the case of proprietary hospitals the reported ambulatory service is generally indistinguishable from the office practice of the staff physicians. Ambulatory service furnished under these several arrangements is usually carried out without any very definite and integrated plan of operation with the health agencies of the communities concerned. This lack of working arrangement is not cited to discount the contribution of hospitals toward improvement of public health, but rather to illustrate the possibilities of more effective action.

The last function assigned to a hospital, that of promoting professional advancement for the practicing physicians of the community, is less tangible than the two previously mentioned. The hospital, too, may through its staff organization exercise an unobtrusive type of discipline over local medical practice without necessarily becoming an instrument for supporting particular social doctrines or professional groups. There is no gainsaying the fact that all too often the hospital is little more than the workshop for a very small percentage of the physicians who have proprietary rights or staff privileges in the only facilities that are available. The remaining physicians derive little or no benefit from what are often presumed to be community institutions; at the same time their patients are deprived of whatever benefits may accrue from continuity in physician-patient relationship.

Another type of hospital organization which cannot be ignored when considering any extension of hospital service or responsibility is the present scheme of ownership, commonly spoken of as control. Aside from the limited facilities operated by the Federal Government, 55 per cent of the hospitals and 63 per cent of the beds are controlled by non-

profit corporations; proprietary agencies figure as operating agencies to the extent of 32 per cent of the hospitals and 11 per cent of the beds; while state and local governments operate 13 per cent of the hospitals containing 26 per cent of the beds.

Institutions of state and local governments for the most part are large and serve primarily the centers of population. Voluntary hospitals, too, are numerous in large urban centers, but the presence of tax-supported institutions tends to release the nongovernmental group from immediate responsibility for serving an undue proportion of the dependent and very-low-income segments of the population. Voluntary hospitals of the smaller communities, on the other hand, are expected to care for all groups of the population, often without the aid of regular appropriation from tax funds. Where those circumstances prevail, service to the underprivileged may be curtailed since the hospitals of the smaller communities usually operate on limited funds with little or no margin over current expenses.

Having in mind the foregoing facts with respect to the existing scheme of hospital organization in this country and the needs of the people, we may resume consideration of the implications contained in the recommendations of the Technical Committee on Medical Care.

Implied in Recommendations I, III, and IV, which deal with grants-in-aid for medical care, is the understanding that existing facilities will be utilized wherever it is feasible to do so. This principle of course will give rise to questions concerning the cost of service and standards of care. Obviously a governmental agency should not be expected, nor could it continue indefinitely, to purchase a service that it can provide more cheaply through public facilities. Comparative costs, however, should take into account investment, interest, repairs, and other fixed charges as well as relative standards of care. Public ownership, however, need not preclude local governments from appointing private agencies to operate publicly owned institutions. This delegation of responsibility should not become a subterfuge whereby a public facility is converted into a private enterprise with consequent restriction of service.

The next point likely to be in issue is that of standards. Even the very simple requirements of the American Medical Association for registration result in deletion from the total of approximately 1500 hospitals; these institutions still continue to give some measure of care and many are regarded as *bona fide* hospitals in their respective localities. Standards such as those specified for approval by the American College of Surgeons reduces even the registered group by nearly one-half. True, this reduction arises in considerable measure from the fact that the College does not grade hospitals of less than 25 beds. If to requirements that pertain to internal organization and operation were added still more based on community relationships, not a few otherwise satisfactory hospitals would have difficulty in meeting the combined standards.

This general discussion might continue since there are many aspects of need and policy which could be inspected. Suffice it to say, however, that agencies now rendering service

and administrators who may be charged with public responsibility will be faced with definite situations which must influence their course of action. A few of these are posed, not for answer, but to stimulate realistic thinking: In how many communities are existing hospitals prepared to satisfy the needs of the people irrespective of the patient's ability to pay for such service? To what extent are facilities open to qualified physicians who may wish hospital connections? Do ambulatory patients participate in the improvement of diagnosis and therapy that should result from the use of hospital equipment? Do hospitals take their appropriate part in the organized community program for public health?

Even the most ardent advocate of the voluntary hospital would perhaps agree that government should assume some responsibility for patients who can pay very little or nothing at all toward meeting their hospital bills. Under Recommendation III of the National Health Program, it is proposed that governments (federal, state, and local) contribute funds which will assure at least a specified minimum amount of hospital care for approximately 40,000,000 people who constitute the wholly dependent and very-low-income groups of the population. In many communities the voluntary hospitals are expected to bear the charity load, and no consideration is given as to how the hospitals may obtain the necessary funds. Without endowment or community contributions in some other form, the hospital has no recourse but to exclude nonpaying patients or limit the intake to a number whose expense will not exceed whatever reserve may be accumulated through collections from revenue patients.

Once the nonpaying patients have been taken care of by taxation, voluntary hospitals should be in position to reduce rates and thus accommodate moderately-low-income groups. Through the device of insurance, hospital costs may be distributed over time and through groups of the population and thus bring facilities within the reach of people who occupy still lower income brackets. At present more than 3,000,000 people are said to have arranged for paying hospital bills through such voluntary insurance plans. This number represents a growth that has taken place within the past few years, and some enthusiasts envision these hospital service plans covering as many as 25,000,000 people.

Before reaching the conclusion that the panacea for all economic problems arising out of illness may be found in hospital prepayment plans, it would be well to bear in mind certain points with respect to their inherent limitations and absence of demonstrated ability. Hospitalization accounts for less than 15 per cent of the total cost of medical care. The feasibility of incorporating physicians' services into hospital insurance plans remains to be demonstrated on a wide-scale basis. The greatest deficiency of hospital care is to be found in rural areas, whereas insurance techniques are not well adapted to agricultural people and self-employed persons generally. At present voluntary hospitals do not have the formal type of organization for accepting administrative and fiscal responsibilities that one might expect of an agency which presumes to enter a field like social insurance that would necessitate covering persons who have very little or no income as well as the self-sustaining members of the population. Because of the factors just enumerated and other limitations

in the financial and organizational structure of hospitals in the voluntary class, it appeared to the Technical Committee that elements of tax support and public control must be integral parts of any feasible plan for extending hospital care, especially to the 40,000,000 persons who at best can meet only a small part, if any, of their bills. Some states may choose to increase the coverage so as to include portions of the self-sustaining population and to defray the cost through taxation or insurance contributions or a combination of the two methods. Health insurance, be it understood, is primarily a method of raising revenue and need not alter the present system of making payments to private physicians and hospitals for the respective items of medical care.

CONCLUSION

If one may judge from rates of utilization of hospital accommodations, it would appear that beds to be supported by paying patients are now available in excess of the revenue to be derived from that source. Barring a significant increase in the national income and a more even distribution thereof, it is safe to assume that most of the necessity for further hospital construction will arise largely through the circumstance of there being made available, from sources other than patients' fees, additional funds for meeting hospital costs. Still another factor likely to remain operative in rural areas is the scarcity of surplus wealth which might be bequeathed for the erection of voluntary hospitals and their endowment to such an extent as will maintain free and part-pay beds in proportion to the size of different economic groups of the population. Account must be taken also of a growing tendency among persons to regard medical service as a right of citizenship rather than the outcome of a charitable impulse.

Because of many and varied circumstances, only a few of which have been mentioned, the presence of government in the fields of general hospital construction and support may be expected. This situation has been recognized by the Technical Committee on Medical Care, and its recommendations have been so phrased as to direct this newcomer into regions and types of service that are complementary to facilities already in existence and to others that may be established. In elaborating on its formal recommendations, the Committee specified that programs should develop under state auspices with no more than technical guidance and financial assistance from the federal authority. If the recommendations of the Technical Committee are enacted into legislation, each state desiring financial assistance must present to the federal authority a comprehensive plan of hospitalization covering such points as: Location and character of existing hospitals and conditions under which accommodations are available; nature and purposes of such additional facilities as are proposed for grants-in-aid; amount of financial participation by the state and the locality; means for assuring continuing support and proper utilization of the units to be added. By imposing on the administrator conditions of this character, reasonable assurance can be given that sums appropriated by the Federal Government will be available for the purchase of care in hospitals of acceptable standards, and that new construction of public hospitals will be geared to actual need for added facilities.

3. Next Objectives, *by Thomas Parran, M.D.**

AMONG the many factors that contribute to health in this country, care of the sick is perhaps the most important. Those who are ill represent a group that have lost something which must be restored if they are to survive and to continue as productive members of society. In this restorative process the use of techniques and facilities in various combinations is required.

It is to the hospital that people look for that type of care which cannot be provided in the physician's office or in the home. Several forces are operative which tend to increase the proportion of patients that should be treated in hospitals. Notable among these forces are changes in living conditions which render the home less suited than formerly to the needs of the sick. Another factor of almost equal importance has arisen out of advances in diagnosis and therapy, that is, the necessity of having at hand equipment and skills which cannot be provided through the resources of the individual patient and his physician. It is not probable that there shall be any immediate reversal in the trend toward more frequent hospitalization; certainly any slowing of the pace is not perceptible at the present time.

Despite statements to the contrary, there is no surplus of hospital beds if existing facilities are considered in relation to need for service. The people of many areas are required to travel excessive distances before reaching the nearest hospital, while in other places one finds the striking paradox of empty beds and patients who cannot be admitted. In one instance there is need for new construction; in the other the problem is that of removing the financial barrier between the service and the person who needs it.

The public health officer in particular appreciates the need of better provisions for patients afflicted with acute communicable disease, tuberculosis, or venereal disease. Few communities, except the large centers of population, are in position to maintain institutions for such specialized care. In every community, however, a significant percentage of communicable disease patients should be treated in a hospital. If accommodations in general hospitals were satisfactory, a number of physicians might choose to treat tuberculosis patients in the areas where they reside. An individual with acute gonorrhea or syphilis often finds difficulty in obtaining admission to a general hospital even though the necessity for hospital care is clear. Refusal on the part of general hospitals to admit any of the three types of patients just enumerated may in some instances be excused on the grounds of unsuitability in the structural arrangement of the plant. More often than not it represents an attitude for which there is no scientific or social justification.

The second role in community service, which through the ages has been associated with hospitals, is care of the ambulatory sick. Not so long ago practically every well-organized hospital either had or hoped to have some day an out-patient department at which the poor of the community might obtain highly specialized services that could be made available through the staff. While new out-patient clinics are being organized from time to time, yet there has been considerable lag of interest in this important element of hospital service.

* Adapted from *Mod. Hosp.* 48:44-45, Jan. 1937.

Such an attitude is to be regretted since organized clinics especially in large centers of population present many advantages over other systems that have been devised for furnishing care to the poor who are ill.

Before out-patient services of hospitals can go forward with renewed vigor, it will be necessary to correct abuses which were all too common in medical dispensaries of the old type. Patients should not be required to wait hour after hour under uncomfortable circumstances, and finally receive a hurried impersonal type of service. Furthermore, there must be an end to the exploitation of physicians. This applies not so much to the very small percentage of clinic patients whose income may exceed the standards of eligibility for admission as it does to the large volume of service that is rendered by the medical staff on a gratuitous basis. Except in a few instances, the prestige or experience attached to a clinic appointment is not in itself sufficient reward for the younger physicians who carry the largest share of the burden.

Clinical and public health practice of the present day demands the use of physical equipment that must be purchased at considerable expense. In this list may be included x-ray, electrocardiograph, chemical and bacteriologic laboratories, and equipment for the common forms of physiotherapy. These facilities and the technical skill required for their operation are not likely to be found in the smaller cities or even in many places of moderate size unless the community resources have been pooled. The hospital, because of its peculiar relationship to professional groups and to the community, might well be the agency in which are merged those local resources that could be used alike by the practicing physicians in caring for their patients and by the public health organizations in the discharge of community responsibilities.

Clinical records in hospitals of this country must represent a vast storehouse of scientific information, yet it is surprising how seldom these data are used in studying the mass expression of illness. Most analyses of hospital records are the result of an interest which a staff member has in a clinical condition. Not infrequently the cases are drawn from his own service; consequently the numbers tend to be small and the patients are likely to show considerable selection from one or several points of view. As a rule, the best of clinical practice is portrayed in this experience. It is true that certain hospitals make tabulations which include all or a large percentage of the admissions, but generally speaking these analyses are designed primarily to meet the routine requirements of the administration office. Little consideration is given to the possibilities of evaluating diagnostic and therapeutic procedures through the use of hospital records. From the standpoint of the general medical profession and the hospital administrators as a group, it should be of great interest to learn what occurs when good procedures are used under circumstances that represent different degrees of perfection in physical equipment and professional skill.

Recently the Public Health Service has had occasion to collect and analyze certain data bearing on hospital administration. Variations found in the figures submitted by similar institutions strongly suggest that hospital authorities give different interpretations to com-

mon terms. There also seems to be a lack of uniformity in accounting practice which must further reduce the reliability of figures commonly used to portray the general picture of hospital services and finances.

The traditional conception of a hospital is that of a place to which an individual may go when he is sick. A large majority of hospitals still center their attention on the patient while he is in the institution but give little thought to other vital problems in the individual's life, such as: Why is he sick? What personal, family, and community problems are precipitated by his illness? What will become of him when it is time for him to leave the hospital? These problems may not impose any great responsibility on the hospital when the patient is cared for by a personal physician, but when the patient is dependent on the staff, it is incumbent on the hospital organization to broaden its interest in the sick individual.

All too commonly the health department will be found occupying another extreme position, busying itself with a few hazards in the general environment. Problems peculiar to the hospital and, in fact, the whole question of medical care have not as yet arrested the attention of public health agencies. Perhaps it is well that hospitals and public health agencies should have progressed so far under different auspices, but the time has arrived for developing working relationships between two agencies that occupy fields which now overlap.

One advantage of cooperative enterprise, that of economy in the use of facilities, has been stressed. Certain intangible benefits in the way of a broader understanding of the whole health problem are destined to evolve from the exchange which is possible in this partnership. It is altogether possible that the hospital may be the most important single contributor to the prevention element in the program of future public health service.

The hospital of today and of future years must consider itself not as an isolated institution for the treatment of the sick, but as an integral part of the community's effort to cure disease by all methods known to science.

4. Mutual Interests of Hospitals and Public Health Organizations, *by Ira V. Hiscock**

ADVANCES in medical science have broadened the horizon of hospitals and public health organizations, increasing their scope of community services and their opportunities for cooperative enterprises. The interrelationship of many problems affecting both the hospitals and the health agencies requires that continuous efforts be made, based on periodic appraisals, to secure the correlation of activities in a manner to insure economy and efficiency in administration. It is also of some concern that medical and hospital services tend to concentrate in population centers,¹ while public health facilities are likewise more highly de-

* Adapted from *Hospitals* 10:9-13, Jan. 1936.

¹ Only about 31 per cent of all physicians and 22 per cent of all dentists are located in communities of less than 5000 population, but they attempt to serve nearly half of the people of the United States. The co-

veloped in urban communities than in rural sections of the United States. This uneven distribution creates problems of medical care and public health of some magnitude.

The modern hospital touches at some point almost every phase of the public health program which is organized to secure environmental sanitation, communicable disease control, early discovery and preventive treatment of disease, and the education of the public in the principles of healthy living. Furthermore, the public is coming to recognize the hospital not merely as a place to go when sick, but also as a place where aid is given to maintain health. To quote from Sigerist:

In every country, the hospital is developing into the center of all therapeutic activity, where medicine is organized and coordinated, and the invalid is offered everything that is medically possible. In America even now, about eight million people a year apply for hospital treatment and during a year 700,000 children are born in hospitals. This development will go further; hospitals will come to extend their functions until they include prophylaxis and grow to be veritable centers for the preservation and restoration of the health of the community.²

The extension of functions must obviously be based on studies of local conditions to insure a balanced program with the resources for private medical supervision and the preventive work of hospitals and health organizations properly coordinated.

The conservation of public health has long been recognized as one of the essential functions of government; and the authorized force created by a governmental unit for health administration is the health department. However, the voluntary agency occupies a place in a community health program for the conduct of certain important activities for which the local official agency is usually not equipped or ready, for the support of adequate standards of service, and for experimentation and demonstration in pioneer fields. On the hospital side of this picture, nearly two-thirds of all beds and 27 per cent of the hospitals are government owned; but 47 per cent of the institutions (with 30 per cent of the beds) are proprietary hospitals, or hospitals run for profit. There are over twice as many general and special hospitals under private control as under government ownership, the latter group maintaining a preponderance of nervous and mental and tuberculosis institutions. As in the public health field, much has been accomplished in the elevation of standards of service by hospitals through the stimulus of nonofficial agencies.³ In the further solution of public health and hospital problems, the continued cooperation of and joint planning by both official and nonofficial agencies are required in view of the important stake which each group holds in the organization.

The greatest advances in public health in recent years have come through the development of full-time county and district health departments. There are some areas in the country which are too sparsely populated and have inadequate tax resources for the main-

operative rural hospital programs of the Commonwealth Fund and of the Duke Foundation and the plantation health and hospital services in Hawaii are valuable contributions to the rural program.

² Henry E. G. Sigerist, *American medicine*, New York, Norton, 1934.

³ Much credit is due the American College of Surgeons, the American Medical Association, and the American Hospital Association for the improvement in American hospitals.

tenance of full-time local health departments, although a combination of towns or even counties may be feasible. Whether the combination of a health and medical program built around a community hospital is the answer to this problem remains to be tested. With the passage in the last Connecticut legislature of an act permitting any group of towns, cities, and boroughs to combine their public health activities and form a cooperative health district, the opportunity is offered to increase the effectiveness of local services of small communities through a program in which the hospitals might play an increasingly significant role in preventive medicine.

A large variety of organized relations between hospitals, clinics, and public health organizations is revealed by joint studies of the American Hospital Association and the Committee on Administrative Practice of the American Public Health Association. Four years ago the Committee on Public Health Relations of the American Hospital Association listed many existing and acceptable forms of organized cooperation between public health agencies and agencies for the organized care of the sick.⁴ In the care of communicable diseases, eight forms of cooperation are stated, each suited to certain conditions. Four forms of cooperation in relation to social service and seven in relation to nursing service are explained. Some twenty-two items are given regarding the use of the diagnostic and treatment facilities of hospitals and clinics in cooperation with official or voluntary public health work. These suggestions are helpful to a local community or agency as a means of promoting economy and effectiveness.

The sound conduct of health work is governed by information obtained from the careful analysis of reports of births, deaths, and cases of preventable diseases. Prompt reporting of these vital data will greatly facilitate the work of the health department and of other health organizations. Delay in reporting a case of communicable disease, for example, may cause the unnecessary spread of this disease, and reports of even suspicious cases are desirable. In Connecticut, as in some other states, it is also required that reports be made of physically handicapped children.

Where cooperative health work involving the care of patients exists, there should be mutual availability of records. In New Haven, for example, considerable information has been assembled concerning the cancer problem through the study of clinic, hospital, and vital statistics records by the Cancer Committee in cooperation with the agencies rendering service. Joint utilization of records is even more common in the fields of tuberculosis and child hygiene.

The utilization by many health departments of private general hospitals for the care of the acute communicable diseases is recognized as a sound policy which has advantages for both groups. The health department benefits from economy in cost of controlling communicable diseases and often from better service, while the hospital can offer a broader experience for its interns and student nurses. General hospitals may properly care for communicable diseases in a pavilion or ward equipped and made convenient for the practice of

⁴ Report of the Committee on Public Health Relations, American Hospital Association, *Bull. Am. Hosp. A.*, Oct. 1931.

aseptic medical technique and should be encouraged to do so if an isolation hospital is lacking. The numerous and successful instances of cooperation in this field suggest their community value. In the development of such programs, the responsibilities of the health department relate primarily to approval of quarters, equipment, et cetera, and to the admission and release of patients, but do not extend to administrative responsibility within the hospital. In the interest of sound and uniform accounting for health work, it is believed that methods of payment of public funds through other channels than the health department should be abandoned in favor of including all amounts expended for the control of communicable disease in the health department's budget.

The American Hospital Association has suggested certain policies in regard to laboratory service which are essentially realized in Connecticut. The State Department of Health provides an excellent laboratory service which aids local hospitals as well as physicians and health departments. This laboratory is equipped to conduct special studies, to continue an investigation beyond a point which might be feasible for a small hospital laboratory, as well as to facilitate generally the investigation of disease and the control of public health problems. It has developed a practical system for approval of local hospital and health department laboratories which conforms to desirable specifications. Several health departments purchase laboratory service from privately operated hospitals. In such cases it is obviously essential that the technician be adequately trained in public health laboratory methods. The reverse form of cooperation, in which hospitals use the health department laboratory,⁵ is chiefly for: (a) examinations for acute communicable diseases—diphtheria, typhoid, tuberculosis, syphilis or gonorrhea; (b) examinations of the more unusual conditions with which hospitals rarely deal—rabies, malaria, and plague, chemical analysis of food and drugs, milk, and water; (c) checking the work of their own laboratories, as in diphtheria and syphilis.

Just as the health department should know the adequacy of service for the organized care of the sick, in terms of type of care, bed capacity, et cetera, from the standpoint of community and public health interests, it must ascertain periodically the extent of hospital laboratory examinations to obtain a complete picture of resources in relation to needs.

It has been suggested that every hospital should constitute itself a local health center for the neighborhood in which it is located.⁶ Cooperation between hospitals and health departments in this field in general consists of the furnishings by the hospital of quarters and equipment while the health department provides some or all of the medical, dental, nursing, social service, or clerical personnel. Local situations vary from complete control of the clinic by the hospital, with the health department merely cooperating in public health relations or perhaps by furnishing a flat financial subsidy, to the other extreme in which the hospital furnishes only the quarters and the health department provides all the personnel, supplies, drugs, and other material.

⁵ Relation between health departments and hospitals, *Amer. Jour. Pub. Health*, Mar. 1928.

⁶ Shirley W. Wynne, Hospitals and the public health, *Weekly Bulletin*, New York City Department of Health, Apr. 5, 1930.

The numerous examples fall into two main groups. The first is the clinic service which largely involves the diagnosis and treatment of diseases, such as tuberculosis, syphilis, and gonorrhea clinics. The location of such clinics in the organized out-patient department of a hospital makes available diagnostic and treatment resources which are seldom provided as completely in isolated clinics. The growth of consultation diagnostic clinics is of interest in this connection. The second type of clinic is exemplified by the child health conference, in which the diagnostic and treatment facilities of the out-patient department are less important. But economy in the use of the plant and personnel as well as convenience of location are factors to be considered, and frequently a decentralized plan will prove most helpful.

Some of the suggestions of the American Hospital report are as follows:

- a. All clinics engaging in curative medicine should be associated with recognized hospitals so that patients may have the advantages of modern diagnostic and therapeutic aids and the highest type of clinical care.
- b. In the event that health departments, whether state, provincial, county, or city, wish to establish or subsidize local clinics, it is preferable that such clinics be placed in approved hospitals rather than in quarters provided by voluntary dispensaries or charitable organizations.
- c. Every general hospital, whether urban or rural, should have a diagnostic clinic or health inventorium which reputable physicians might utilize for periodic health examinations of their patients. More hospitals should be developed as health centers.

Miller has ably presented the educational and economic value of an out-patient department to a general hospital.⁷ The educational advantages provided include: (a) a training school for future staff members; (b) postgraduate training for the courtesy staff; (c) improvement in admitting service for the hospital; (d) follow-up service; (e) training in prognosis; (f) opportunity for scientific studies.

The economic values concern not only the hospital management, but the contributing public, the contributing patient, and the practitioner himself. An effective hospital social service department may also be an important connecting link with the health organizations, and is responsible for discriminating use of community health resources, even though its primary purpose is to further the medical care of the patient through medical social case study, interpretation, and social treatment.⁸

There is a chain of influences which begins at the hospital and extends out to the individual home. The first of these is the out-patient department; the second is the health center; and the third is the public health nursing staff, often working in cooperation with a medical social service staff in carrying the health message into the individual home. While hospital and institutional care of illness is carried out under specialized services, the home

⁷ James Raglan Miller, *Bull. Amer. College of Surgeons*, Jan. 1929.

⁸ See Elizabeth Richards Day, *Interrelations of the hospital social service departments and the Community Health Association of Boston*, 1928; and *The functions of hospital social service*, American Association of Hospital Social Workers, Monograph 1. 1930.

services can best and most economically be conducted on a generalized district plan, the out-patient service forming the point of transition from the specialized to the generalized scheme. The modern physician is a key person in this modern preventive medicine program.⁹

The hospital and the clinic have a responsibility for the education of both patients and personnel. The opportunities of health education in the clinic have been ably discussed by Galdston,¹⁰ who urges that the clinic, instead of being only a place to which the lame and the halt go for cure, might also serve as a center where persons might be instructed on how to keep well. Our present-day knowledge of the nature of disease indicates that to cure a patient we must also teach him. Preventive medicine, even more than curative, depends for effectiveness upon education. Dr. Lawrason Brown, speaking on the role of education in the treatment of tuberculosis, said that he looked upon the sanatorium as a sort of college where men and women were reeducated in a newer method of living. If the tuberculosis patient needs to be reeducated to a newer method of life, many other types of patients, both in the clinics and in the hospitals, may likewise be served.

The clinic offers an excellent opportunity for general health education through visual methods and literature and for special instruction regarding immunization against disease. Through physicians and nurses in maternity and children's hospitals, a unique opportunity for instruction in maternity and child care is provided.

The clinical-pathological conferences in some hospitals, besides special lecture series, are valuable from a public health viewpoint as well as for clinical purposes. High standards of medical and surgical practice favorably influence the public health experience of a community. Stimulus may be given to house physicians to take epidemiological as well as purely clinical histories, and to consider the social backgrounds of their patients in relation to other problems. Such topics as the indications for the use of antipneumococci serum and the importance of filling out case records properly are timely. The Connecticut Department of Health makes a valuable contribution to the education of pupil nurses through a course of public health lectures given upon request at nurses' training schools.

Both hospitals and health organizations are concerned with legislative affairs and may be affected by the same regulations. Of the new public health legislation pertaining to hospitals in Connecticut in 1935 were four developments of special interest: (a) an act concerning the prevention of blindness among infants and requiring reports to the local health officer of "inflammation of eyes of newborn" within six hours; (b) an act concerning the prevention and treatment of cancer and establishing a cancer program which involves co-operation of hospitals and the health department; (c) an act concerning marriage licenses, which requires that a Wassermann or Kahn test be made of both man and woman before marriage; (d) an act requiring that no hospital which receives appropriations made by the general assembly and which has facilities reasonably suitable for the treatment of venereal diseases shall refuse to admit for treatment any patient suffering from any such disease.

⁹ Ira V. Hiscock, What is an adequate health program? *New England J. Med.*, Dec. 20, 1934.

¹⁰ Iago Galdston, The philosophy of health education in the clinic, *Hospital Social Service*, Jan. 1931.

In view of the extent of the public health problems which concern the hospitals, and of the increasing opportunities for development of close relationships between the hospitals and health organizations, the need of mutual understanding of these joint problems and of resources to meet them is apparent. The value of some method to establish liaison should also be emphasized. Wherever possible, when health departments and voluntary health and welfare societies are engaged in cooperative activities, a recognized hospital should be included in the liaison, if only to serve in a consulting capacity. Similarly, the presence of a well-trained public health executive on a hospital board or committee is helpful. In the development of a carefully planned, comprehensive program, a health council composed of representatives from the various community health organizations and the medical profession is a useful instrument for the purpose of directing correlations between hospitals and other health agencies.¹¹

Finally, in considering the broad general principles upon which a sound community health program should be based, we need to visualize the whole field of curative and preventive medicine. The distinction between prevention and cure can seldom be sharply drawn in the individual instance. Provision is necessary, through the work of private physicians, hospitals and dispensaries, official and nonofficial health agencies, for the furnishing to each individual in the community of the best attainable hygienic supervision and medical care, under economic conditions which will make their utilization easy of attainment.

5. City Health Center, by *Haven Emerson, M.D.**

THE district health center is as inevitable as the district fire house, school, or police station. It is now almost twenty-five years old in the United States. As a piece of administrative machinery it plays a double role. It is a substation of the city health department, from which field agents carry services to the homes of the district and to which all necessary information of persons and families and premises of the district is brought or sent—a neighborhood office in the citywide organization of civil government. It is also a meeting point in which official and nonofficial agencies can readily collaborate for common purposes. As expressed in the *Encyclopedia of Social Sciences*:

This new unit in city neighborhoods and in rural county seats or crossroads, the health center, is a fitting physical and functional expression of an ideal based upon the recognition of the need of continuous central coordinated health work for local population groups. The health center may be likened to the chain store, where the resources of the earlier general department store are brought conveniently close to many small neighborhoods and communities.

There are other ideas commonly held regarding the function of the health center which call for consideration, particularly two: (a) some would make a health center into head-

¹¹ Report on hospital councils, their functions and organization, *Tr. Am. Hosp. A.*, 1934.

* Adapted from *Mod. Hosp.* 49:40-41, Aug. 1937.

quarters for all varieties of out-patients and even for emergency or temporary bed care of the sick, in other words, a branch of the hospital facilities of the community for diagnosis and treatment of disease; (b) some would provide in the health center for official and non-official welfare agencies, for relief visitors, and district relief administration, and for visiting nurse associations. Before discussing the former conception of this new intriguing instrument for social ends, let us define the two public applications of medicine: organized care of the sick and the public health service.

Organized care of the sick is the diagnosis and treatment of disease through institutions and agencies. Its eight functions are: hospital, dispensary, convalescent home, chronic home, visiting nurse service, medical social service, ambulance service, and home medical care.

Public health service is the application of the medical sciences by government for the prevention of disease for social ends. Its six functions are equally well defined: vital statistics, communicable disease control, sanitary control, laboratory services, maternity services and child hygiene, public health education.

Here are fourteen specialized activities. You must decide whether this new instrument you are going to create is to undertake one or the other of these groups of functions. My own opinion is that only services for health provided by the health department should be administered through the health center. I do not believe that the diagnosis and care of the sick should be undertaken in a city health center, even in the fields of tuberculosis, syphilis, gonorrhea, or maternity or for the administration of immunization procedures, except under temporary or emergency conditions.

A health center may, as in Alameda, Calif., be operated adjacent to or actually as a part of a public hospital and out-patient dispensary. There are certain advantages in having a health center located in the immediate vicinity of well-developed organized medical services for diagnosis and treatment of disease and there are possibilities of cooperative use of records, personnel, and other facilities. As an example, the visiting or public health nurse may serve both the medical treatment institution and the health center, but the two activities are best carried out under separate directions.

Now for the second conception of a district health center. In New York and Boston the district offices give free space to private agencies dealing with the whole family problem. Although there is real convenience in agencies dealing with the whole family problem having access conveniently to records and competent report systems in the health center building, I am not favorable to government subsidizing of private agencies. Housing such agencies, rent free, is subsidizing. There is no more propriety in expecting taxpayers to provide district offices for philanthropic agencies engaged in social relief purposes than there is for police stations to have offices for legal aid or crime prevention agencies, or for recreation leagues and the W.C.T.U. to have space and maintenance provided in the public schools.

Stripped of complexity and controversy, the health center in a large city should be now, as in its origin, the district depot for all field services of the health department and should

be under the exclusive control of the district health officer. In a well-developed line and staff organization it is the distributing and collecting office for all field activities in the appropriate district.

If health services of large cities are to meet best their largest obligations they will have to adopt the administrative device of decentralization of field services through district or neighborhood offices. They can do this without sacrificing the benefits of a central staff organization to provide the direction, planning, standards, analyses of records, laboratory, epidemiological, and statistical services indispensable for any city health department. It seems to me that only by creating an economical district unit for the conduct of official neighborhood health work will the health center be able to justify itself.

Government should take primary responsibility for all public health activities as previously defined, and more and more this duty is recognized by the appointment of a more trustworthy type of health officer, by better security in office, and through the use of less inadequate appropriations. When for social, political, or financial reasons the performance of the local government, aided or not by state grants or federal subsidies, lags behind the conscious needs of the community, volunteer health activities and the aid of philanthropy can usually be found to develop supplementary services.

Whether health work is wholly tax supported, as is rarely the case in the United States, or is largely provided by volunteer health agencies, as is common in both cities and rural areas, the administrative device of the center offers the best prospect of satisfying a community or neighborhood social consciousness of its health needs with least waste of time, money, and energy and with the greatest tangible results through education and example.

Essential to the success of any health service by government is close collaboration with the six professional groups to be found in almost every city neighborhood: doctors, visiting nurses, dentists, school teachers, the clergy, and social workers, also with the local press, labor, real estate, merchants and manufacturing interests, and parent-teacher organizations, all of which groups should be welcomed to use the assembly or lecture rooms of the health center for public purposes in the interest of neighborhood health.

These groups should be consulted, but they should not have a deciding voice in the function and operation of the health center. The New York system has set up two advisory groups—one of doctors and one of the health agency group. They are in a position to dominate the policies and activities of the health officer although they have no official responsibility. I think you will come to believe that these groups sitting in with the health officer should not have a deciding voice as to policies, records, or functions. They should, however, confer with the district health officer and, through the district health center, take advantage of opportunities for coordinated and cooperative service.

What part should the health commissioner play in this? My feeling is that until the health commissioner has taken the thing, hook, line, and sinker, and is wholeheartedly committed to the project there is no use for the private agencies bothering themselves with the matter at all. Until the health commissioner has pledged himself to support and back

the health center as a pleader before the appropriating body of the city there is no use of private philanthropy getting into it. We must be committed to a government body undertaking this as a project to improve its services.

6. Dovetailing Health Work, *by Charles F. Wilinsky, M.D.**

THE committee on public health relations of the American Hospital Association called attention several years ago in its annual report to the fact that few nationally recognized health centers are housed in hospitals, and that the establishment of health centers could rarely be traced to hospital workers. Health centers had been developed as a rule, the report stated, by health departments, frequently in cooperation with large philanthropic foundations. This was influenced by the availability of tax funds for buildings and equipment and generous grants from foundations. The report emphasized the lack of such financial resources in small communities, and stressed the possibility of utilizing hospitals for health center objectives, and programs.

The health center movement is of comparatively recent origin. In its inception its motivating principle was the bringing together under one roof of agencies engaged in public health services and, when possible, of agencies carrying on welfare activities. The sponsors of this movement, which originally took root in only a few places in the United States, believed that the bringing together under one roof of groups engaged in common effort would result in better coordination and would tend to eliminate the duplication and waste found when a number of agencies carry on activities from different headquarters and without coordination of effort.

It was recognized that one building, serving as physical headquarters for agencies engaged in community health work for a definite unit of the population, would minimize confusion and duplication. Furthermore, it was evident that the efficiency of the different agencies would be improved because of the unifying influences of a common meeting place and because of the opportunities for daily intimate discussion of mutual problems. The need for the coordination of health and welfare services is particularly striking because few communities enjoy a complete program maintained exclusively under either municipal or private auspices. The prevalent picture is that of a number of functioning agencies, official and voluntary in their support, maintaining various essential activities. For example, it is not unusual to find a prenatal clinic under the auspices of one agency, baby clinics under another, and tuberculosis clinics, visiting bedside nursing service, venereal disease clinics under the direction of others, some official, some voluntary, and some receiving support from both sources.

Complications arise from duplications which come about because similar public health programs are being maintained by more than one agency in a community. Another problem is the gap due to the absence of an essential service. It is in the development of better

* Adapted from *Mod. Hosp.* 47:61-63, Sept. 1936.

understanding, in the coordination of effort, in the avoidance of gaps and the prevention of duplication that the health center has been most effective.

We find the term "health center" frequently used in connection with maintenance of one distinct service, such as "baby health center," "tuberculosis health center," "child guidance health center." A survey of health centers in connection with the White House Conference indicated that several thousand so-called child health centers existed, all of which gave only limited service. These should be distinguished from health centers which offer a complete program of preventive, clinical services and which usually house a majority of the community agencies engaged in health relief work.

Boston, New York City, Buffalo, Wilkes-Barre, Pa., Los Angeles County, Cal., are some of the communities in which are found striking examples of the type of health center conducting a varied program and presenting the advantages of coordinated effort.

In Boston a health center known as the Blossom Street Health Unit was founded twenty years ago. Its objective from the beginning was the carrying out of the principles defined above. A number of years later the bequest of a generous citizen of Boston, George Robert White, enabled the health unit movement to expand, and through the expenditure of approximately three millions of dollars seven health units were built and equipped. These centers are in the congested sections of the city and maintain an extensive program of preventive services, supplemented materially by the activities of the official and voluntary relief agencies. The units serve as the physical headquarters of all approved agencies concerned with the protection of public health and the amelioration of human suffering.

The American Red Cross, which shortly after the World War was an important factor in the furtherance of the health center movement, financed the development of the East Harlem Health Center in New York City. The influence of the excellent work carried on at East Harlem did much to promote health center organization in other sections of New York City. While the East Harlem Health Center, the Bellevue-Yorkville Health Center, the Judson Health Center, and the Bowling Green Health Center were supported originally by private funds, some have been taken over by the New York Department of Health. Federal funds have also been allocated within a comparatively recent period for the establishment of a chain of health centers in various parts of New York City, to be maintained by the city health department. There was established over a period of years a series of centers in various sections of Los Angeles County, Cal., which offered a combination of both preventive service and treatment, including, moreover, a limited number of hospital beds for what may be termed emergency service. This was an excellent demonstration of decentralized health services on a county basis. A chain of health centers, providing preventive and, in a measure, curative services, was set up in Buffalo early in the history of the health center movement through the joint efforts of the department of health and the Buffalo City Hospital.

Further examples could be cited illustrating the advantages of coordinated health and welfare services as carried on in many communities in the United States. The programs

maintained by these centers may be said to vary according to the particular needs of the area and people they serve. Some offer preventive services only; others curative; still others a combination of both, depending upon local conditions and requirements. Some health centers receive financial support from tax funds, others from voluntary sources, some from both sources.

Health centers have been classified as centralized and decentralized in type. Those in Wilkes-Barre, Pa., and Schenectady, N. Y., may be considered as examples of the centralized type of health center serving an entire community through the medium of the agencies housed under one roof. In these cases the health center functions as the headquarters of the department of health of the city and of other essential community health agencies. On the other hand, Boston, New York City, Buffalo, St. Louis, and other cities have a chain of health centers, located where most needed, which offer community service on a decentralized basis. The variance of programs is well illustrated by the program of the already mentioned Los Angeles County health centers which are intended to provide not only preventive service but a combination of surgical and medical service with emergency beds and laboratory work. The program of the Boston Health Units, on the other hand, includes prenatal care, infant and preschool clinics, dental service, nutrition clinics, a mental hygiene clinic, tuberculosis service, bedside nursing care, mothers' classes, solariums for pre-tuberculous children, welfare service, and similar preventive work.

The committee on public health relations in urging that more hospitals be developed as health centers indeed charted the way for a wise journey, for it is undeniable that many communities have not the financial resources to build and equip health centers. Moreover, it is true that substantial expenditures would not be justifiable in many communities where well-functioning hospitals exist and around which it would be logical to build the complete community program for preventive and curative medicine.

It is important to call attention to the fact that hospitals are carrying on a number of activities of significant public health value, particularly in their out-patient departments and dispensaries. The treatment of contagious diseases, the isolation of infected persons, the diagnosis and treatment of gonorrhea and syphilis, tuberculosis, diabetes, heart disease, cancer, the care of the crippled, and dental care are but some of the services offered by hospitals and out-patient departments, which are intimately related to public health. In the food clinic, in the education of the individual in the principles of personal hygiene, in occupational adjustments, in the training of personnel, in reaching out to the community itself with a health message, hospitals serve in many communities in the capacity of health centers.

In maintaining the above services, hospitals and clinics perform important functions which play a significant part in the conservation of health, in shortening the duration of illness, and in lengthening life. To these services may be added, in communities where health departments are not already conducting them, such valuable public health activities as prenatal and postnatal care, well-baby and preschool clinics, including facilities for vaccination against smallpox and immunization against diphtheria. Serious consideration

should be given to the maintenance of child guidance mental hygiene clinics because of the recognition of the value of this type of service for the prevention of various psychiatric conditions.

In attempting to link hospitals with health centers, one must emphasize the need for co-operation between local departments of health and the hospitals of the communities they serve. While in large cities budgets may provide for the maintenance of headquarters by health departments for clinical activities, in small communities it will be frequently found feasible to develop a relationship whereby a good local hospital may serve as headquarters for the carrying on of clinical services under health department auspices. In other instances it may be practical for the health department to give financial assistance to the hospital for the maintenance of prophylactic services which are in the ordinary course of events the responsibility of the official health agency. In still other instances the hospital may find itself obliged to meet the preventive needs of the community by maintaining essential prophylactic services. Individual local conditions must be considered in deciding what method will best serve the particular community under consideration.

7. The Relationship of the Private Medical Practitioner to Preventive Medicine, *by Sir Arthur Newsholme, M.D., F.R.C.P.**

My duty here is to outline briefly developments and changes during recent decades, in Europe generally and particularly in Britain, in preventive as related to clinical medicine, and the influence of this altered orientation on the work of the private medical practitioner. I may claim some advantage in discussing this subject; for not only did I engage in general medical practice during several years of my earlier professional life, but also for over thirty-five years I held responsible positions in public health work in England; and more recently I have during several years had opportunities to observe forward movements in America, and for the last three years have been completely occupied in a special study of the problem throughout Europe.

My simplest plan would be merely to outline the main movements in Europe, leaving the reader—as I must in the end—to determine how far and in what respects, if any, European experience may be applicable to the circumstances of American life. To give this outline is my main task; but my sketch of European developments will, I am convinced, be more useful if prefaced by a few postulates, most of which will command unalloyed approval. These postulates, if accepted, will help in the judicial weighing and measuring of European developments. I am not without hope that some, at least, of these postulates will be considered worthy to rank as axioms.

My first postulate is that

1. Neither instructed public opinion nor the medical conscience, which in this connection is the advance-guard of Christian civilization, can tolerate the continuance of neglected sickness.

* Adapted from *J.A.M.A.* 98:1739-1743, May 14, 1932.

Several corollaries, or interdependent postulates, follow from this first postulate:

2. Medical care in its widest sense must be made available for all, as an important element in securing maximum efficiency and happiness in a civilized community.

Neglect to provide medical care for every member of the community being repulsive to the medical even more than to the public conscience, it follows that

3. Gaps and imperfections in present medical services must be made good and medical care must be of a quality which does not lack in any essential respect all that is necessary for expeditious recovery or for comfort, if recovery is unattainable.

It will be agreed that there can be no difference of opinion as to the preceding postulates. Controversy arises only when plans and methods are discussed, which necessarily are governed by financial as well as by medical considerations.

It is unnecessary for me to argue the truth of the further postulate that

4. Health is worth whatever expenditure is efficiently incurred in its maintenance or to secure its return.

I will therefore proceed at once to the postulate that

5. In present circumstances, both in America and in Europe, adequate scientific medical service has become unattainable by isolated or family effort standing alone, for a high proportion of the total population.

The evidence in favor of this statement is given in *Medicine and the State*; its truth is beyond dispute.

In passing, it is well to remember that there is a corresponding dependence on extra-familial aid in our own training for the medical profession. In Britain, and I assume also in America, a large share of the cost of medical education is borne by state endowments or by gifts and endowments from the beneficent rich. It may be said, then, that neither doctors nor their patients are completely independent of communal financial aid, supplementing family resources.

The last postulate leads to the next:

6. For a large portion of the total sick population measures must be, and in part are already, organized to assist in providing necessary medical services, the sources available being private charity, communal taxation, and provident insurance for future needs.

In Europe these three sources, or two of them, are often seen in combination.

The need for special medical services (laboratory, physical diagnosis, specialist clinical departments) is an outstanding feature of modern medicine. While we welcome these aids to good work—for the rapid development of which general medical practitioners, in their

wish to do the utmost for their patients, are largely responsible—I desire to add a further postulate as follows:

7. There is need to organize such cooperative work as will secure that specialism, which necessarily is concerned mainly with the disease, is not allowed to submerge the wider and wiser outlook of the general practitioner who is concerned with the patient himself.

Modern medicine calls for a further postulate, demanding a wider investigation of his patient than the private practitioner and specialist often give:

8. There is often needed a study of the patient from a psychic, social, economic, and occupational standpoint, if his illness is to be accurately diagnosed and satisfactorily treated.

In view of this desideratum it is not surprising that social agencies and public authorities have taken a hand in medicine; and here again, as in the parallel case of experts and private practitioners, we still need to discover and to apply the best concerted methods of social team work.

One further postulate is now generally accepted:

9. Modern medicine is becoming increasingly physiological and decreasingly pathological.

—an effort on the part of the physician to aid in securing and maintaining maximum psychophysical efficiency, not merely or only efforts to regain it when damaged or lost. This change necessitates the searching out of early departures from health, and the giving of counsel in health which if adopted will diminish or prevent their occurrence.

At this point an almost parenthetical remark may be made on periodic medical examinations, the advocacy of which has become an accepted policy of the medical profession. In my view, these examinations should usually form part of a medical overhaul of every member of a family by the family doctor, the findings to be reviewed at intervals. I have never disguised my opinion that periodic examinations of men, say between 40 and 60—though the advice based on such examinations is useful and may retard illness—are too late as regards the most serious causes of breakdown in this middle period of life, and that the earlier family care predicated above has an immensely wider scope of preventive potentiality. It is at earlier ages that the chief sources of permanent middle-life breakdown originate. In childhood and youth occur the septic diseases and acute infections, including acute rheumatism, which produce cardiac and other disablements in middle life; at the same period of life or in early adult life tuberculosis causes a serious though decreasing drain on life; while the syphilitic virus, usually inoculated in early adult life, produces its results in arterial degeneration, premature old age, and insanity perhaps some twenty years later.

These three greatest sources of permanent disablement and death during the working

years of life can best be obviated by the application of clinical and social medicine during childhood, youth, and adolescence. But, let me add, I do not doubt that later medical overhauls have some preventive value, and a greater value in staying the progress of disease already present.

With the preceding postulates in mind, let us next glance at European developments in the relationship between the public and the private practice of medicine. Public authorities for long have busied themselves with the medical care of the sick poor (and of maternity) both domiciliary and in hospitals. In other directions their incursions into medicine have been more recent and have been activated chiefly by the growth of preventive medicine and public health.

Medical Aid for the Poor. In all European countries there is some provision of medical aid for the necessitous, including help in childbirth. It may take the form of a special medical officer in every district for this work, as in Britain and the Scandinavian countries; or, as in France, every doctor may undertake this work according to a fixed schedule of fees. The French system is being advocated in Britain by the British Medical Association. This medical service for the poor includes also institutional medical treatment, now greatly improved in quality in Britain. In Ireland, in many, especially in rural, districts, half the population receive gratuitous medical service; and it may be said that Ireland approaches nearest of all countries known to me to a state medical service the cost of which falls on general taxation. Its medical officers are not precluded from private practice.

In Scotland there is a special state service for its Highlands and Islands, in which, otherwise, medical aid would be lacking. The government guarantees the salaries of doctors in supplementation of fees paid by patients, and gives mileage allowances for traveling. Local needs in this important development have impelled governmental action at the expense of the national taxpayer. Is not such action indicated in certain mountainous parts of the southern states in America, especially for midwifery and for that terrible disease trachoma? Not even the most rigid opponent of state intervention can doubt its necessity in areas where otherwise our three first postulates cannot be met.

This is the case of utmost need; but, short of this, nearly every private medical practitioner, especially in rural districts, day by day is himself a vicarious substitute for the state, for he gives medical aid gratuitously—as every member of the medical fraternity in conscience must—when need arises. He resembles the tax gatherer—except that much medical work is gratuitous—in that he charges his patients not according to their needs but according to their means; and as in the case of taxation it is payments by the well-to-do which enable him to attend his poorer patients gratuitously or at a charge which does not cover expenses. Thus the private doctor, the tax gatherer, and the medical official alike are state servants, but the state service of the first of these is unacknowledged.

Hospital Provision for the Poor. Hospitals in the first instance were an output of Christian charity, their full medical utility developing very slowly. In nearly every country hospitals are now the chief centers of medical work and of the research in medicine which is indispensable for progress. In Britain, voluntary hospitals, provided by the gifts and be-

quests of the charitable, still hold their premier position. But in recent decades public authorities in every country have been active in providing hospitals, and in continental Europe the hospitals of these authorities have almost completely replaced voluntary hospitals. In Britain, voluntary hospitals have held their ground, but they have not met the rapidly increasing needs of the public, and now official hospital beds—even when the beds in mental hospitals are excluded—largely exceed in number the beds in voluntary hospitals. Private practitioners, as they will agree, are largely responsible for this great increase of treatment in hospitals, through their scrupulous desire to secure for their patients the full advantage of special skill in medicine and surgery.

In continental countries, payments are exacted from hospital patients according to their means, the payments for insured patients being made in part by the insurance societies to which the patients belong. In England very rapidly there is growing up a voluntary system of partial insurance for hospital treatment, independent of the compulsory national sickness insurance scheme, for about a third of the total population. For a weekly payment of perhaps three pence, employers sometimes contributing an equal amount, families are partially insured for consultative services and when necessary for treatment in hospitals. In some towns, half the cost of maintenance of voluntary hospitals is now derived from this and allied sources.

Evidently such a system lends itself to increasing abstractions from private medical practice; and although the majority of these patients would be sent to a hospital by the medical practitioner treating them, there are others who should remain under his care. This needs to be more strictly regulated. In countries in which national sickness insurance schemes are in operation (Germany and Austria, Hungary, Poland) there has occurred an immense development of hospital and polyclinic (ambulatorium) work which greatly needs to be coordinated and regulated, owing to its independence of the work of the general practitioner.

Outside Britain, national insurance schemes include some hospital treatment, but continental insurance organization can seldom pay more than half the cost, and in all countries hospital charges are paid largely, sometimes completely, by general taxation. The arrangements in Britain have already been indicated.

The foregoing is a brief outline of the position reached in what, for lack of a better term, I must call socialization of the medical services, domiciliary and institutional, for the absolutely necessitous, the poor, and for that large part of the total population who are not far above the poverty line.

Is clinical medicine preventive medicine? At this stage the criticism will suggest itself that my remarks do not relate to preventive medicine. But if, as I claim, medicine is preventive when it curtails illness, when it decreases suffering, when by treatment (e.g., of an operation for cancer, or the radical cure of hernia or varicose veins) it restores a patient to the rank of self-supporting citizens, or when, for instance, in the scientifically regulated administration of insulin, it gives many added years of useful life, then surely clinical medicine is preventive medicine in a real sense.

If this be admitted, then we must regard all efficient clinical medicine as also an important branch of preventive medicine. But we are especially concerned with new developments of clinical medicine having direct and obvious bearing on public health, and to these we must now direct our attention.

1. *Free hospitals for infectious diseases.* In its earlier development, public health was fairly distinct from clinical medicine in most particulars, but never completely so; for even in the course of the earlier dramatic triumphs won by sanitation, the necessity arose also of treating cholera patients and of treating and segregating cases of "fever" and smallpox. Now in nearly every country some hospital provision for the chief infectious diseases is provided gratuitously. Thus, for the isolation and treatment of the infectious sick the socialization of medicine has become almost complete.

2. *Free immunization.* A step beyond this has been taken. Public medical vaccinators are provided in most countries for gratuitous vaccination against smallpox. In rural districts in Norway, specially trained midwives do some of this work.

More recently a large amount of immunization against diphtheria has been done at the public expense, especially in America. In America this may be done also by private practitioners to whom public authorities supply the necessary toxoid-antitoxin at the public expense, and whose officers may give demonstrations of the method to be employed. My own view is that, subject to strict regulations as to methods, private practitioners should be entrusted with this work for both smallpox and diphtheria, and paid for it by public authorities as a fixed charge irrespective of the social position of patients. Under such a system we should, I think, secure a much more widely protected population than at present.

3. *Free ancillary services.* The provision by public authorities of ancillary aids to diagnosis is another development of socialized medicine of great importance. In the initiation of laboratory facilities for the diagnosis of diphtheria and tuberculosis, American pioneers, Biggs, Prudden, and Park, have led the way.

The extensions of such work, including sometimes free examination of tumor specimens and of blood counts, and on the physical side x-ray photographs in tuberculosis, are well known. In every country these state-paid arrangements exist more or less fully developed. Here, then, is a further instance of the socialization of a branch of medicine, which, although it belongs to clinical medicine, is equally important in preventive medicine. One cannot easily exaggerate the value of the aid thus given not only to the doctor and his patient but also to preventive medicine, when adequately utilized by the medical practitioner in his daily work.

But public health authorities have not confined their activities to communicable diseases.

4. *Treatment of noninfectious diseases.* I have already claimed clinical medicine as a branch of preventive medicine, in a large part of its activities. Let me take as a further example that of the institutional treatment of cripples. Local authorities in Britain on a large scale now treat institutionally cases of hip disease, extreme rickets, or the deformities following poliomyelitis, and thus, partially or entirely at the public expense, restore many children to useful life.

5. *The care of maternity.* To a very exceptional extent—though in continental Europe a vast amount of public aid is given in maternity—the care of maternity has become in England a subject of wide action by public authorities. Midwives, who attend 60 per cent of total confinements, are strictly supervised and regulated by these authorities. They are obliged to call in medical aid in emergencies. The doctor called in is chosen by the patient, and the local authority is legally required to pay the doctor's fee on a fixed scale. The local authority recovers this fee from the patient or her husband, or part of it, when possible. Local authorities also provide lying-in hospitals for poorer women, treatment in which is given at low charges, sometimes remitted. They also provide antenatal consultation centers, the relation of which to the work of general practitioners is not yet thoroughly adjusted.

Returning to communicable diseases, tuberculosis and venereal diseases are two of the chief scourges of mankind, accounting probably for a fifth part of the total deaths from all causes; and it is to combat these diseases that public authorities have entered most extensively into clinical medicine as an agent of public health.

6. *Control of tuberculosis.* Work for the control of tuberculosis in Europe is like that in America. Free bacteriologic examination of sputum is provided, still too often neglected by some private practitioners. Then the reporting or notification of cases of tuberculosis is required as soon as the practitioner has made his diagnosis; and here also one must bemoan that the fulfilment of this duty is often neglected and oftener seriously delayed.

The general measures taken are well known, and I need not particularize except to say that in all European countries the institutional treatment of tuberculosis is undertaken by public authorities, chiefly at the expense of the taxpayer. In continental Europe much of this cost is borne by sickness insurance funds, but in Britain it falls entirely on the public authorities. The position is accepted and acceptable to most practitioners. The fact that one-third of the total population of Britain is insured under the national insurance scheme, and that the treatment by public authorities lifts some burden from the practitioner's shoulder without implying any reduction of his per capita payments, is a factor in the position.

7. *The treatment of venereal diseases.* In most European countries, some treatment of venereal diseases is undertaken at the public expense. In several European countries (Austria, Italy, Denmark, Sweden, and Britain), gratuitous treatment is undertaken by public authorities without restrictions. In Belgium, free medicaments are supplied to doctors, and great stress is laid on securing the cooperation of private practitioners. In Britain, private doctors have come to regard these diseases as needing specialist treatment, and I have often been informed by them that they thankfully pass on their cases of these diseases to the clinics of the public authority. A minority of doctors continue to treat their own patients, and arsphenamine is supplied free to these doctors.

The position in Britain has become one of almost complete socialization of the treatment of venereal diseases at the expense of the public purse. Clinics (usually attached to voluntary hospitals, that is, hospitals not supported by taxation) are provided in all considerable centers of population; and patients are treated at these (in hospital beds when

necessary) gratuitously without any residential restriction and with entire disregard of financial position. Pathologic examinations (for gonococci and Wassermann tests) are also undertaken gratuitously for all practitioners.

A tribute must be paid to the attitude of the British Medical Association in this matter, as representing the mass of medical opinion. When the report of the Royal Commission on Venereal Diseases was published in 1916, and the government promptly made its national proposals, these were sent in draft to the council of the association; and in its reply the association, while realizing that they embodied "a new departure of a most important kind," resolved in general approval of these proposals that

measures for the best modern treatment of venereal diseases should be readily available for the whole community, and that arrangements made should be such that persons affected by these diseases will have no hesitation in taking advantage of the facilities for treatment that are afforded.

It further resolved that

the treatment at any institution included in a local authority's scheme should be free for all. There should be no refusal to treat a patient who is unwilling to go to his own doctor.

In its report on this subject, the council of the association made the following comment, subsequently endorsed by the representative meeting of the association.

The policy of the association in connection with treatment at hospitals has always been that persons who are able to pay for their own treatment should not be treated at charitable institutions except in emergency, but should be referred to a private practitioner. In endorsing the recommendation of the Royal Commission the council recognizes the exceptional nature of venereal disease; the reluctance of patients affected by them to go to their private medical attendant; the risk that they may go to unqualified persons for treatment with disastrous results to themselves and to others; and the importance to the community of adopting all possible measures for inducing sufferers from venereal disease to seek early and adequate treatment. On these grounds the council is of opinion that the recommendations of the Royal Commission should be accepted and approved by the association.

As I was a member of the royal commission whose recommendations were thus endorsed, and as I was officially responsible for formulating and organizing the measures to give them effect, it is pleasant once more now to testify to the public-spirited action of the general medical profession in Britain as voiced by their association. At the present time unrestricted gratuitous venereal disease clinics are available everywhere, and the reduction in the amount of one of our chief social cankers has justified the action of the government and the medical profession's endorsement of this action.

8. *The searching out of disease.* Public authorities have not been contented with sharing

in the cost of treatment of a certain number of diseases at the expense of the communal purse. In recent decades a most striking development has occurred, as the result of increasing realization that delayed treatment of the sick implies a lowered prospect of recovery and protraction of inability to work; and more and more it is being realized that the ideal for the medical practitioner is not merely to treat patients who apply to him but to enter into an arrangement with the families entrusted to his care, which will enable him, without suspicion as to his conduct being altruistic, to strive to discover disease hitherto undetected and to prevent its continuance. This means an important development in preventive medicine. Payment according to the number of "medical acts" has discouraged development in this important direction; and until the circumstances of family remuneration are altered, most practitioners in all countries remain relatively helpless except for their insured patients. Meanwhile several of the postulates already stated are being partially neglected; and until or unless this neglect ceases, we cannot as private practitioners of medicine complain if public authorities "get busy." As a medical confraternity it is our business to make public activities at least partially superfluous.

9. *School medical service.* This point is best illustrated in the findings of school medical inspectors. Without detailing the important work under this heading in many European countries, it may be said that in all of them some official treatment of defects and diseases found in school children is being effected, though, as a rule, parents are encouraged in the first instance to employ their own doctors. We cannot reasonably object, either, to the inspection or the medical treatment of school children at school clinics, unless as private practitioners we are able to organize arrangements which are equally good and complete for every child attending school whose parents are able and willing to pay. Even then children will remain for whom public treatment must be provided.

In continental Europe the amount of medical work needing to be done by educational authorities is less than that in Britain, because in the former dependents come within the scope of the treatment given under national sickness insurance schemes. In Britain also—except for the minor conditions for which parents seldom have a doctor—the treatment undertaken in school clinics is chiefly specialist in character (e.g., ringworm, ophthalmic tests, treatment of adenoids and deformities, dental treatment) and for most pupils this specialist treatment must be carried out either at hospitals or in special school clinics. It should be added that the morbid conditions found by school medical inspectors commonly are the late results of long-established disease (otorrhea, advanced dental caries, deformities) or of malnutrition; but although these ought often to have been discovered some years earlier, their neglect would, but for the school service, have been still further prolonged.

We have, then, in the medical inspection of schools and the resultant action a further instance of socialization of medicine, having as its object the discovery and treatment of neglected illness. It is a form of socialized medicine which might, to a very considerable extent, be replaced by cooperative team work by private medical practitioners. It is socially

desirable that they should in fact arrange to take up this much neglected work and thus secure the fulfilment of the postulates already stated, either alone or with supplementary aid from public agencies.

10. *Treatment to anticipate disease.* We come last to the greatest advance made in medicine, an advance shared in varying proportions between public authorities and the most far-seeing of private medical practitioners. This consists in action which, constituting, as it does, anticipatory treatment, prevents the occurrence of illness and defects. In this direction lie the chief future triumphs of medicine, and it is for private practitioners themselves to determine whether this work shall remain largely the domain of public authorities and social organizations or whether private practitioners shall carry out this work for every family in their care. To do this work, general practitioners will need to pool some of their activities, to employ jointly not only sick-bed nurses but also public health nurses (health visitors) to undertake much quasi-medical work, which is too costly when done by doctors and cannot be expected from them, though they should guide and direct it. On these lines, rickets will soon disappear; more favorable growth and development will be promoted, and the general standard of health will be raised through improved nutrition and general hygiene. The promotion of the psychic health of children forms an important part of a complete program in this direction, which the medical practitioner must recognize, even though his share in this work is chiefly indirect.

Meanwhile in every European country public authorities and voluntary agencies are busy with this most important of preventive work; while private practitioners who might be in charge of much of it, singly and cooperatively, have little concern with it, under present conditions of medical practice. The program here indicated cannot wait; hygienists and their organizations will not wait; educated public opinion will not wait; cannot we hope that private practitioners will make it a chief part of their future work?

11. *Insurance treatment.* In the preceding very rudimentary outline of my subject, I have only incidentally mentioned the great sickness insurance systems which are now established in most European countries. They have not hitherto conduced much to preventive medicine, except so far as treatment of disease tends to prevent its prolongation, to reduce its severity, or to prevent its recurrence. I do not doubt that under highly satisfactory organization the medical care in sickness insurance can be made valuable as an instrument of preventive medicine; though this will be difficult. The difficulty in securing this end is undoubtedly increased by the fact that monetary benefits depend on medical certification; for a scheme of insurance for domiciliary medical care without money benefits during disablement has not, so far as I know, been adopted on a very large scale in any country. Even with the handicap constituted by combining insurance for medical and for monetary benefits, the cause of preventive medicine can be satisfactorily served if we secure almost superhuman competence in the management of the insurance scheme, and that the scheme furthermore is adhered to by every insured person and every doctor with almost superhuman loyalty and integrity.

I have already indicated my view that for a large section of the population a complete

medical service necessitates contributions from the persons benefited on an insurance plan, and that even then some aid from the state is necessary. The only practical alternative consists in vast extensions of state service without insurance.

Under an insurance service, hospital and consultative services can be brought within the reach of all; and doctors by pooled effort can similarly supply a domiciliary service which will be satisfactory both to them and to their patients. Additional communal help would be needed for the poor.

I agree that money benefits during disabling sickness are a great boon, even though the medical problem is much more difficult when combined with the financial problem. The lot of the doctor who has to hand out certificates which authorize money allowances is not altogether happy, and the withholding of such certificates is often an obnoxious task. But it may need to be faced, especially so if—and this appears to me to be the position throughout Europe—the practical alternative is a medical system in which doctors would be, and their patients would be paid for, in the same way as are our state school teachers and the pupils under their charge in our system of national free elementary education.

But even the defects of existent sickness insurance systems should not loom too large in our minds. Furthermore, defects in other branches of public medicine and in private practice alike only partially obscure the great advances and improvement both in private and in public medicine of the last thirty years. Ignorance will continue, though it will grow less; the immeasurably more serious defects of character will also continue, in connection both with public and with private medicine; but they will, I am confident, decrease, and we can look forward to a higher standard of medical work and a more complete utilization of the invaluable aid which medicine practised in a cooperative spirit can give to humanity. But vigilance and altruistic effort will always be needed on whatever detailed lines increased utilization of medical skill develops and extends.

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